The *Golden Hands Encyclopedia of*

CRAFTS

The complete guide to traditional and modern home crafts

Volume 10

Golden Hands Encyclopedia of

CRAFTS

Marshall Cavendish

Contents

Front Cover Photograph: Ken Kirkwood
Back Cover Photograph: Peter Dorp

＊ **Not suitable for children without
adult supervision**
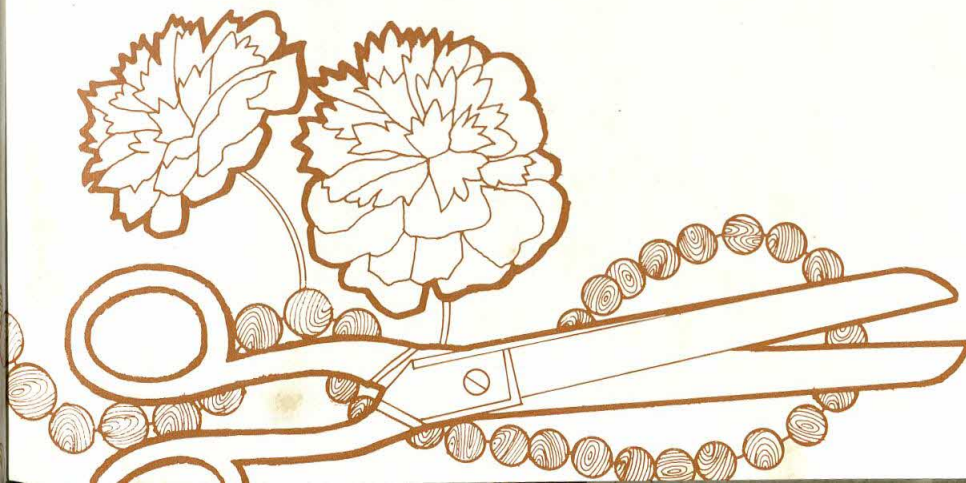
Suppliers addresses
United Kingdom

Please send a s.a.e. with any enquiries to the suppliers below

Creative Ideas 36. Trims buttons at Woolworths and haberdashery counters of most department stores.

Creative Ideas 39. Adhesive platehangers at H & J Cooper, 6 Harwood Cotts, Gillingham, Dorset for mail order service. Plate wires at most hardware stores and china departments of large stores.

Paper 26. Materials at stationers and most art supply shops.

Plastics 13. Tools, resin and pigments at Alex Tiranti Ltd, 70 High St, Theale, Berkshire for home and overseas mail order or 21 Goodge Place, London W1 for personal shoppers. Glass fibre and resin at Trylon Ltd, Wollaston, Northants, and Bondaglass-Voss Ltd, 154 Ravenscroft Rd, Beckenham, Kent. Tools and materials also at Strand Glass Fibre, Brentway Trading Estate, Brentford, Middx. All the above offer mail order service.

Paper 27. Hardboard or plywood at stationers, art and DIY shops.

Paper 28. Materials at stationers, hardware and DIY shops.

Plastics 14. Tools, resin and materials at Alex Tiranti Ltd, 70 High St, Theale, Berks for home and overseas mail order or 21 Goodge Place, London W1 for personal shoppers. Resin and glass fibre at Trylon Ltd, Wollaston, Northants and Strand Glass Fibre Co Ltd, Brentway Trading Estate, Brentford, Middx who both offer mail order service. Fabric and tray from a selection at Liberty & Co Ltd, Regent St, London W1.

Ropework 1. Materials at Ropecraft, 13 Seamoor Rd, Westbourne, Bournemouth, Dorset who also offer mail order service.

Printing 15. Helizarin dyes for fabric screen printing and all other screen printing supplies at Selectasine, 22 Bulstrode St. London W1 who also offer mail order service (catalogue available). Dylon cold water dyes with Paintex thickener and Procion dyes with Manutex

thickener at Hobby Horse, 15 Langton St, London SW10 who also offer mail order service (catalogue 25p including postage).

Patchwork 5. Templates at The Needlewoman Shop, 146 Regent St, London W1 (who offer mail order).

Patchwork 6. Templates at The Needlewoman Shop, 146 Regent St, London W1 (mail order service).

Printing 16. Profilm and general supplies at Selectasine, 22 Bulstrode St, London W1 (catalogue available). Transfer papers at E. T. Marler, Deer Park Rd, London SW19. All the above also offer mail order service. Screen printing enamels for pottery at Harrison Mayer Ltd.

Printing 17. Photosensol which is mixed with Stencil Medium for coating screens, and other materials at Serigraphics, Fairfield Ave, Maestag, Glamorgan who also offer mail order service (free brochure available). Special ultra-violet lights, acetate film, opaque ink for making positives, special gelatin, screen emulsion (ask for instruction sheet for use) and other materials at Selectasine, 22 Bulstrode St, London W1 who also offer mail order service (catalogue available). Blouse, skirt and hat at Laura Ashley, 9 Harriet St, London SW1.

Clay 24. Materials at The Fulham Pottery Ltd, 210 New King's Rd, London SW6 4NY; or at Southern Supplies Centre, 42 Morley Road, Tonbridge, Kent; Harrison Mayer Ltd, Meir, Stoke-on-Trent ST3 7PX; Ferro (Great Britain) Ltd, Wombourne, Wolverhampton WV5 8DA who also supply overseas; Wengers Ltd, Garner St, Etruria, Stoke-on-Trent, Staffs ST4 7BQ.

Pewter 1. Materials at Colorcraft, 1 Enson Close, Saffron Walden, Essex CB10 1HL who also offer mail order service.

Leather 2. Suede enquiries at The Tannery Shop, Queen St, Gomshall, Surrey. Leather tools and accessories at J. T. Batchelor & Co, 146 Fleet Rd, Hampstead, London NW3 2RH, who also offer mail order. Buckles at John P. Milner, 67 Queen St, Hitchin,

Herts SG4 9TU. All the above also offer mail order service.

Macramé 6. Dowel at local wood merchants. Beads, cane and string at Hobby Horse, 15 Langton St, London SW10 who also offer mail order service (catalogue 25p including postage).

Macramé 7. String at stationers. Wooden rings at Hobby Horse, 15 Langton St, London SW10 who also offer mail order service (catalogue 25p including postage). Photographed at Warehouse, 39 Neal St, London WC2.

Leather 3. Suede enquiries at the Tannery Shop, Queen St, Gomshall, Surrey. Leather tools and accessories at J. T. Batchelor & Co, 146 Fleet Rd, Hampstead, London NW3 2RM; both the above also offer mail order service. Red beads and brooch at John Nicholas Ltd, 6 Newburgh St, London W1.

Carpentry 15. Materials at DIY, timber and hardware stores. Chess pieces and dried flower picture at Peter Jones, Sloane Sq, London SW1. Victory by John Gardner © A. Hugh Evelyn.

Glass 10. Glass at James Hetley & Co Ltd, 10 Beresford Ave, Wembley Middx. Glass and lead also at The Chelsea Glassworks, 105 Fulham Rd, London SW6. Vase caps for personal shoppers only at W. Sitch, 48 Berwick St, London W1 (custom-made only).

Basketry 7. Materials at Colorcraft, 1 Emson Close, Saffron Walden, Essex CB10 1HL who also offer mail order service. Wood stains by Dylon. Napkins at Bourne & Hollingsworth, Oxford St, London W1. Wine glasses and corkscrew at David Mellor, 4 Sloane Sq, London SW1.

Latch-hooking 1. Pingouin tapis at Madame Mafé, Rosslyn Boutique, 32 Rosslyn Hill, London NW3. Canvas and latchhooks at The Needlewoman Shop, Regent St, London W1 or Rug-craft Centre, Croft Mill, Albert St, Hebden Bridge, Yorks. All the above also offer mail order service. Bikini, head-band, sunglasses and bangle at Harvey Nichols, Knightsbridge, London SW1. Glass at David Mellor.

Lapidary 4. Gemsai tree kits at Baines Orr Ltd, 1 Garlands Rd,

Redhill, Surrey, who offer both home and overseas mail order service. Chipboard and mirror at DIY shops. Stones at Gemrocks of Holborn Ltd, 7 Brunswick Shopping Centre, Marchmont St, London WC1. Owl, cigarette box and jar at Peter Jones.

Metrication

In this volume you will find two systems of measurement. The first set of figures refers to the metric system and the Imperial figures follow in brackets. Wherever possible, a commonsense approach has been adopted and both sets of measurements have been worked out in round numbers. **BUT BEWARE!** This means that metric and the Imperial figures are *not* equivalent so make sure you only work with one or other set of figures.

Creative ideas 36

Among the many things found in a sewing box that lend themselves to collage are button moulds such as Trims buttons and scraps of colourful cloth.

To make a button picture like the fruit bowl, the one shown here measures 25.5cm x 24cm (10x9½"), you will need some scraps of brightly coloured fabric and several sizes of Trims buttons. You will also need a piece of fine cotton for backing fabric, scraps of felt, embroidery thread, clear fabric adhesive and a piece of thick card or hardboard for mounting the finished picture for hanging.

Cover the buttons following the manufacturer's directions. Fine or silky materials may need several thicknesses to cover well and it may help to wet difficult fabrics first.

Use varying sizes for different fruit, ie smallest for cherries and grapes, largest for apples and oranges.

To add texture use embroidery stitches; French knots for pips on strawberries, satin stitch for the effect of an orange peel. The colour of the thread used can also indicate shadows and highlights.

When you have completed the buttons cut the shapes for bananas and leaves from felt scraps.

Cut a symmetrical bowl shape from a piece of fabric folded in half. A small, flowery pattern will look like patterned china.

Making-up the picture. Arrange the button fruit on the backing fabric and mark the centre of each button on the backing with a pencil mark, this makes it easier to position and stitch them on later.

Glue the bowl in place on on the backing fabric with a clear fabric adhesive and leave to dry. Then stitch on the fruit. Secure each button very firmly to the surface of the backing. Finally add stalks and leaves cut from felt.

When your picture is finished stretch it as tightly as possible across the card or hardboard and secure it by folding the edges to the back and gluing them.
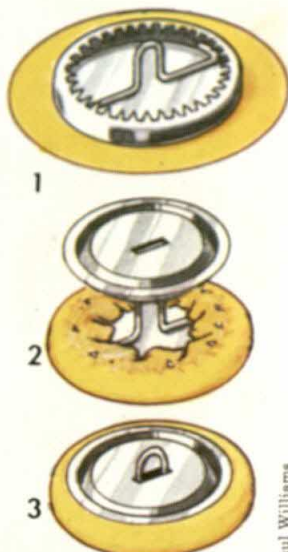
1. Cut fabric circle.
2. Stretch over button shape.
3. Fix button back.

Paul Williams

Peter Heinz

Creating stained glass effects

Most people associate stained glass windows exclusively with ecclesiastical architecture. But there is no reason why coloured window decorations cannot be used in the home.

Extremely attractive stained glass effects can be obtained by pasting translucent coloured papers on to a glass window pane, or by hanging them against a window. This is great fun to do and the results can serve a practical purpose as well as provide an unusual and pretty decoration. Moreover, being merely superimposed on to an existing window, paper stained glass effects can be removed quickly and easily without damage to the glass if and when you wish.

Translucent coloured papers pasted on to, or hung against, a window pane allow light to filter into a room (and, in sunshine, to cast lovely coloured shadows) but simultaneously obscure the view outside. This has obvious advantages for rear windows facing dreary views of fire escapes, light wells and suchlike that one would prefer to be without. And it is a good way to prevent people looking in on you—just as effective and far more decorative than net curtains!

Choosing style and subject

As can be observed from fine examples to be found in many ancient churches, the richer the colours and the more extensive the design, the more intense and jewel-like the effect of a stained glass window. But remember that, although impressively rich, medieval inspired styles are liable to create dimly lit interiors (just think of some churches).

Any stained glass effect will, of course, cause some loss of light. The larger the decoration, the greater the potential loss—and an intensely coloured decoration covering the entire surface of the one and only window in a room will certainly produce a darkish room.

Some rooms do not require much daylight. In fact the effect of darkly glowing light can make a positive contribution to certain styles of décor. A whole window richly decorated in medieval style might well enhance the character of, say, a study furnished in the Victorian manner, emphasizing its quiet warmth and privacy. But the same degree of decoration would probably prove oppressive (and impractical) in a room of constant activity, such as a kitchen, where a sense of fresh air and light is desirable. This is not to say that royal blues, amethyst, ruby and emerald colours cannot be successfully used for stained glass effects in a kitchen—merely that their use should be sparing. An ugly view can often be hidden by a decoration that covers the bottom half of a window only, thus leaving the upper part completely free for light to flow in. Alternatively, the design could extend over the whole window but be partially coloured only, leaving areas of clear glass here and there—sufficient to mask details of the view outside yet allowing plenty of light to enter.

Books on Art Nouveau provide a rich source of inspiration for those who want to create stained glass effects with a light and airy feeling. Most designs of this period use coloured glass in certain areas only, and these colours are usually subtle and more opaque: warm shades of peach and amber, apple green and olive, browns, and splashes of turquoise and lilac. Designs are graceful and highly decorative, based on stylization of natural forms. Sinuous floral shapes were particularly popular, often used alone to border small windows, or as a frame to contain a picture for a larger window.

But there's no need to dig into history for ideas, or to feel restricted to imitate styles of the past. Modern ideas and styles could be every bit as effective as traditional ones. Use your imagination to create abstract or geometric patterns, land- or seascapes, still life, or portraits of real or fictional characters. And colours can be as realistic or psychedelic as you like!

Suitable papers

Cartridge paper or very thin card is the best material to use to represent leading. Charcoal grey is most realistic, of course, but black is quite effective too. Cut like a stencil this acts as a frame for the coloured paper 'stained glass' which, glued to the reverse side, will show through the cut-out areas.

Plain papers. Any flimsy, semi-opaque paper is suitable for the 'stained glass'. The simplest method is to use one large sheet of white tissue paper or layout paper—a thin artists' paper available in pads from art shops. Trace the entire glass design on to it, colour each area as required, then glue the sheet on to the back of the 'lead' frame.

Felt-tipped pens can be used for colouring, but they must be new, so that the ink really flows. Nibs must be soft or the paper is liable to become scratched and harsh-looking, and may even tear.

Coloured papers. Cutting and sticking an individual piece of coloured paper behind each 'lead' stencil cut-out is rather more complicated, and you may prefer to use the simpler method described above for your first attempt. But, once you have mastered the basic technique of making paper stained

Michael Holford
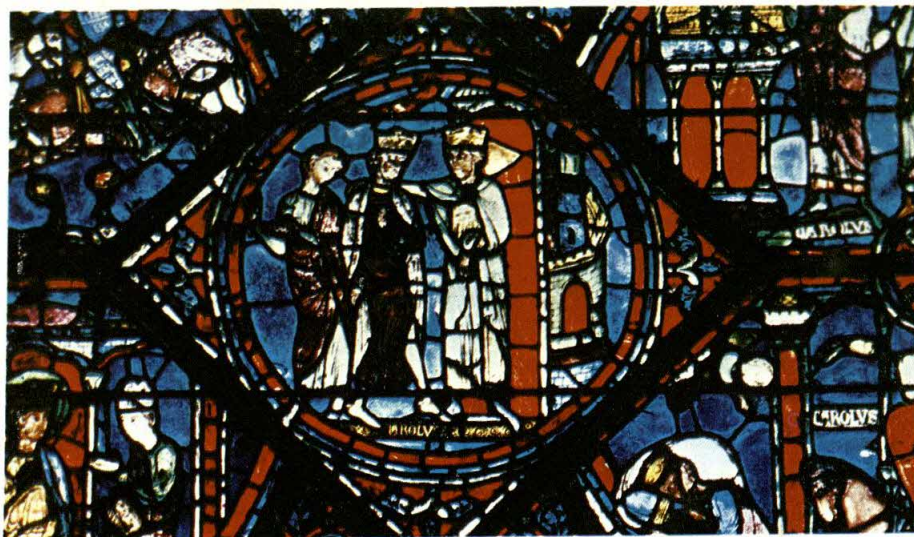
Left: This detail from a window at Chartres cathedral is a magnificent example of ecclesiastical stained glass. Right: trace pattern for paper 'stained glass' King and Queen (see overleaf).

glass effects, it is difficult to resist the wider colour range and translucent vibrancy of coloured tissues and cellophanes.

Cellophane is transparent film (semi-translucent when coloured). Very thin cellophane is often used for outer packaging (to cover cigarette packets for instance) but brilliantly coloured cellophane is usually slightly heavier in weight, as in sweet wrappers. Cellophane in various colours is sold by the metre or yard from stationers and art shops. It creases easily. Badly crumpled sweet papers, for instance, cannot be completely smoothed out, but light creases can be removed by placing the cellophane between two sheets of blotting paper and ironing with a warm iron.

Sealing. It is a good idea to seal a completed stained glass effect with transparent acetate, sticky backed transparent film or polyurethane varnish. This will protect it from dust and damage, and will also help slow down the inevitable fading process. All coloured papers are, of course, liable to fade quite quickly when exposed to light—particularly direct sunlight. Primary colours are relatively resistant but colours such as bright cyclamen pink fade remarkably quickly. Whilst it will continue to look pink for some time, the tone will change from brilliant to muted very rapidly.

King and queen picture

You will need:
A sheet of black or charcoal grey cartridge paper.
A piece of white tissue paper, 25cm x 16cm (9¾"x6¼").
2 pieces transparent acetate film, 25cm x 16cm (9¾"x6¼").
Tracing paper.
Coloured felt-tipped pens.
Clear general purpose glue, such as Bostik No. 1, and adhesive masking tape.
Scalpel, steel ruler, pair of compasses, white chinagraph pencil.
(Chinagraph pencils are wax based and used for writing or drawing on surfaces, such as glass, which will not take an ordinary pencil, and on dark papers where pencil lines would not show up well. They are useful, for instance, for writing captions in a photograph album and are obtainable from art shops and some stationers.)
☐ Cut the cartridge paper into four pieces, each measuring 16cm x 25cm (6¼"x9¾").
☐ Cut a piece of tissue paper, a piece

Below: coloured tissue paper 'glass' and cartridge paper 'lead' can be stuck direct on to a window pane or, as shown here, made into a free-standing 'stained glass' effect picture to hang against the light. King and Queen design by Kevin Caston.
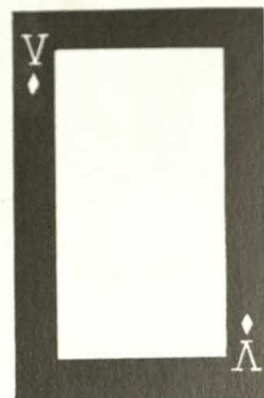
1. Border frame and motif are traced on to one piece of cartridge paper. A second piece of cartridge paper is then placed under the first, and the two are cut out simultaneously with a sharp scalpel.
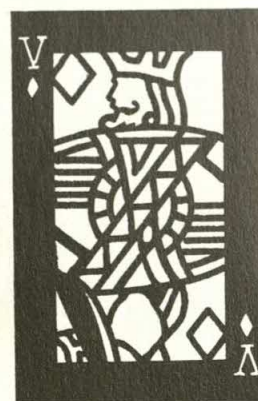
2. The third and fourth pieces of cartridge paper are made into 'lead' stencils, using the same procedure as described for the border frames.
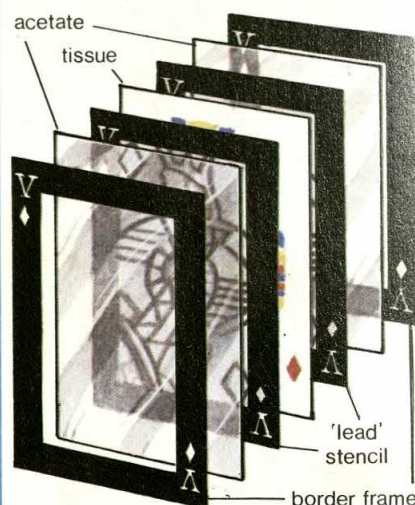
3. Sandwich 'stained glass' tissue (coloured on both sides with felt-tipped pens) between 'lead' stencils, cover with transparent acetate, and finally add the border frames.
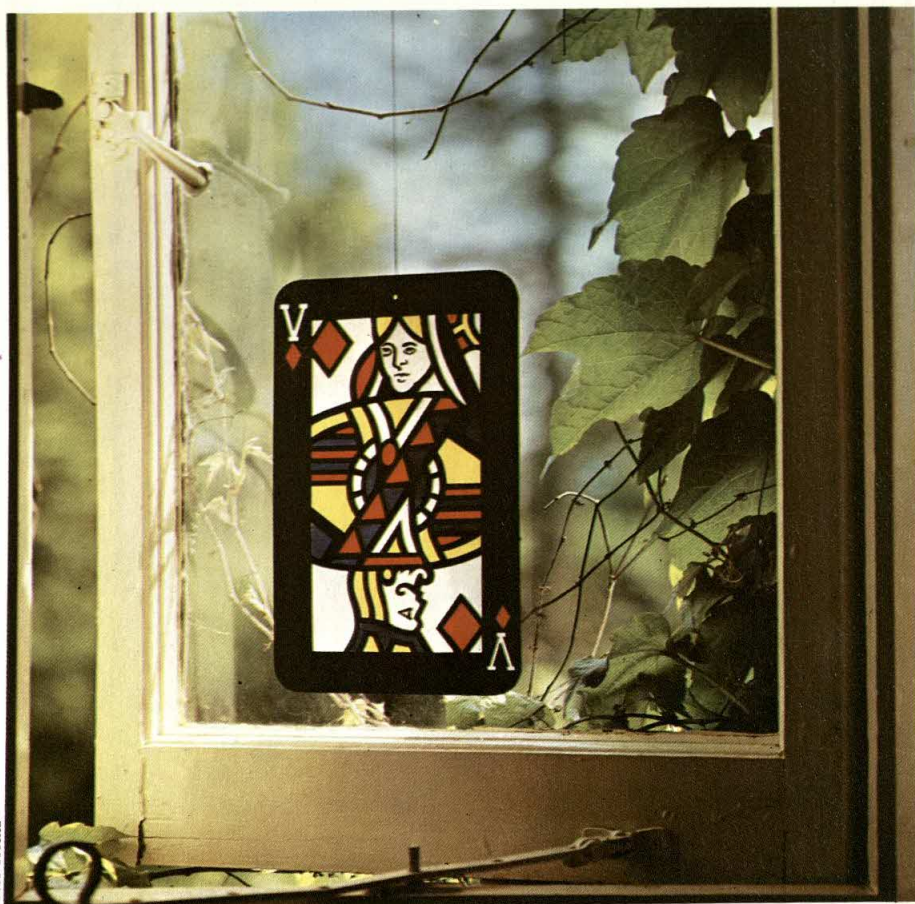
of tracing paper and 2 pieces of film to the same measurements.

☐ Draw border lines round the tracing paper, 25mm (1") from the edge of the sheet. Trace all the picture from page 1011 into the central area, and the initial motif in the border corners—using perhaps your own initial or that of the person to whom you are going to give the picture.

☐ Turn the tracing paper over and go over the trace lines with a white chinagraph pencil.

☐ Then trace the white border markings and border motif on to one of the pieces of black or grey cartridge paper.

☐ Place a second piece of cartridge paper exactly under the first. Lay the two pieces on a cutting board or wad of old newspapers. Hold firmly together with masking tape, and use a scalpel or sharp knife to cut out the border motif and cut away the entire central oblong (fig.1).

☐ Next trace the central king and queen design on to the third piece of cartridge paper, and again repeat the border motif.

☐ Place the fourth piece of cartridge paper under it, and, following the procedure given above, cut out the border motif and make the central 'lead' stencil by cutting away areas to be filled with 'stained glass' (fig.2).

☐ Lay the tissue paper on a flat surface. Place the third piece of black paper on top and trace the cut-out shapes on to the tissue paper with a soft pencil.

☐ Remove the 'lead' stencil and colour the shapes on the tissue paper with felt-tipped pens. When colouring, go slightly beyond each traced pencil line. This ensures no white paper shows in the finished picture and any excess colour will be hidden behind the 'lead' stencil. Draw in with black pen details of the queen's face, and the king's eye.
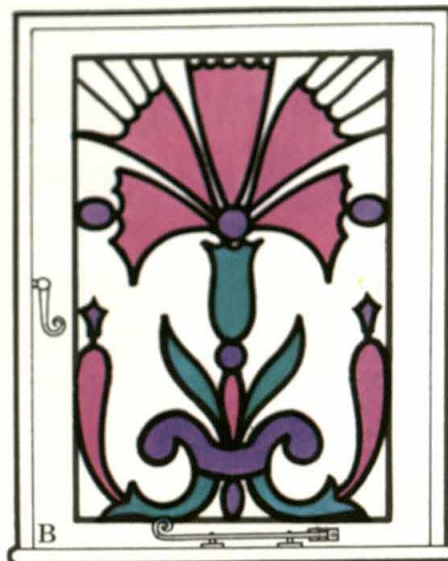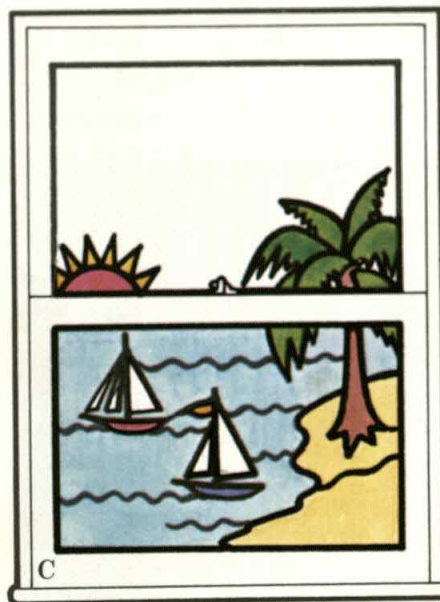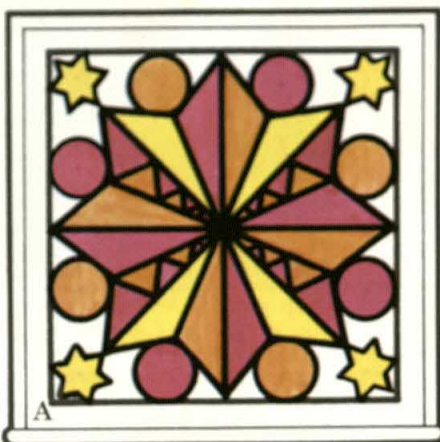
☐ Turn the tissue paper over and colour the reverse side too. A certain amount of colour will already show through the paper, but going over it again will make the colours stronger.

☐ When the tissue paper is quite dry assemble the picture (fig.3). First lightly glue the edges of the reverse side of one of the 'lead' stencils and line up very carefully and stick on top of the tissue paper.

☐ Carefully glue the second 'lead' stencil on to the other side of the tissue paper.

☐ Cover each side of lead with a protective layer of transparent acetate, using glue round the edges only.

☐ Finally carefully line up and stick a border frame on to each side of the picture. Using a compass, round off the four corners and cut away. Make a small hole in the centre top of the border frame (use the compass point to do

this), thread with a piece of cotton and tie a loop so that the picture can be hung against a window or other source of light.

To make a 'stained glass' window

☐ Follow the basic instructions given for making the 'stained glass' king and queen picture, but adapt them. For example, there is no need to sandwich the 'glass' paper between two identical 'lead' stencils—unless you want the window to look equally good when viewed from outside. Border frame and central stencil can be cut from the one and same piece of card or paper. A transparent sticky-backed film, such as Transpaseal, could be used to protect the decoration and glue it to the window.

☐ Always measure very accurately the size of the pane or panes of glass to be decorated.

☐ Make a rough sketch of a composition suitable for the size and shape of your glass, using a thick-nibbed, black, felt-tipped pen to represent the leading and coloured crayons for the

A. *Geometric design based on medieval Rose window could be used to cover an entire window or, reduced in size, as a repeat pattern to form a decorative border round a large window.*
B. *Even using dark, rich colours this type of design is suitable for rooms where plentiful daylight is important because it does not block out too much light. Although the composition is carried over the whole window and masks details of view outside, large areas of glass are left uncoloured thus maintaining a light, airy feeling.*
C. *A useful idea for bathroom or bedroom where both privacy and light are needed. This scheme lets in maximum light but leaves the top half of sash window virtually clear.*

stained glass. Then enlarge to actual size on tracing paper, and use this as a pattern for tracing off and cutting out both 'lead' and 'glass' areas.

☐ Keep shapes fairly bold but avoid very large coloured areas as flimsy paper is liable to crinkle in time (particularly cellophane). Equally, it is best to avoid very small coloured areas. Remember that in real stained glass, details such as facial expressions and flower stamens are usually painted on afterwards; they are too small and delicate to cut from tiny pieces of glass. Tiny pieces of coloured paper are just as difficult to work with and a felt-tipped pen can be successfully used to draw on to coloured tissue paper. Do this carefully and avoid smudging.

☐ Be careful to keep 'lead' lines broad enough for the 'glass' papers to be glued and concealed behind them.

☐ Scissors are probably better than a scalpel for cutting the 'glass' shapes from coloured tissue paper. Remember to cut the coloured shapes slightly larger than your tracings indicate so as to allow sufficient margin for sticking behind the 'lead' stencil.

Working with glass fibre
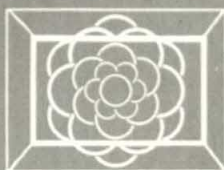
In previous chapters polyester resin is used to make a variety of craft objects, both decorative and practical. The resin on its own, however, is not very strong; it needs the introduction of glass fibre to make a tough, almost indestructible material, strong enough for car bodies, simple enough to use at home and sufficiently versatile to make the tray illustrated overleaf.

Resin-impregnated glass fibre cloth laid in layers over a mould is known as a laminate. The first layer of resin which provides the smooth top surface is called the gel coat. Two or more layers of impregnated glass fibre are later added. When cured the object is separated from its mould and is extremely durable and light-weight. This type of material, sometimes called glass fibre-reinforced plastic (GRP), can be sawn, drilled or joined together and, in addition, it can be easily repaired if damaged.

Types of glass fibre

Glass fibre is a fabric composed of short strands of glass filament adhered together for easy handling. It is made in various weights and weaves.

Glass fibre is usually 90cm (1yd) wide and can be purchased by a measured amount (or by the roll). It is generally priced by weight.

Surfacing tissue is a very fine material used to cover a rough surface of glass fibre when it needs to be extra smooth.

Chopped strand mat is most often used for reinforcing resin. The fibres are laid in all directions and it is easy to tease out some of the mat to join it to another cut section.

Glass scrim is like a cloth which can easily be laid into deep curves. It is used instead of chopped strand mat when the mould has a deep or intricate curvature.

Rovings are filaments of glass plaited into a cord. The rovings are the basic yarn used to make the various glass fibre cloths.

A. *Surfacing tissue.*
B. *Chopped strand mat.*
C. *Glass scrim.* D. *Rovings.*
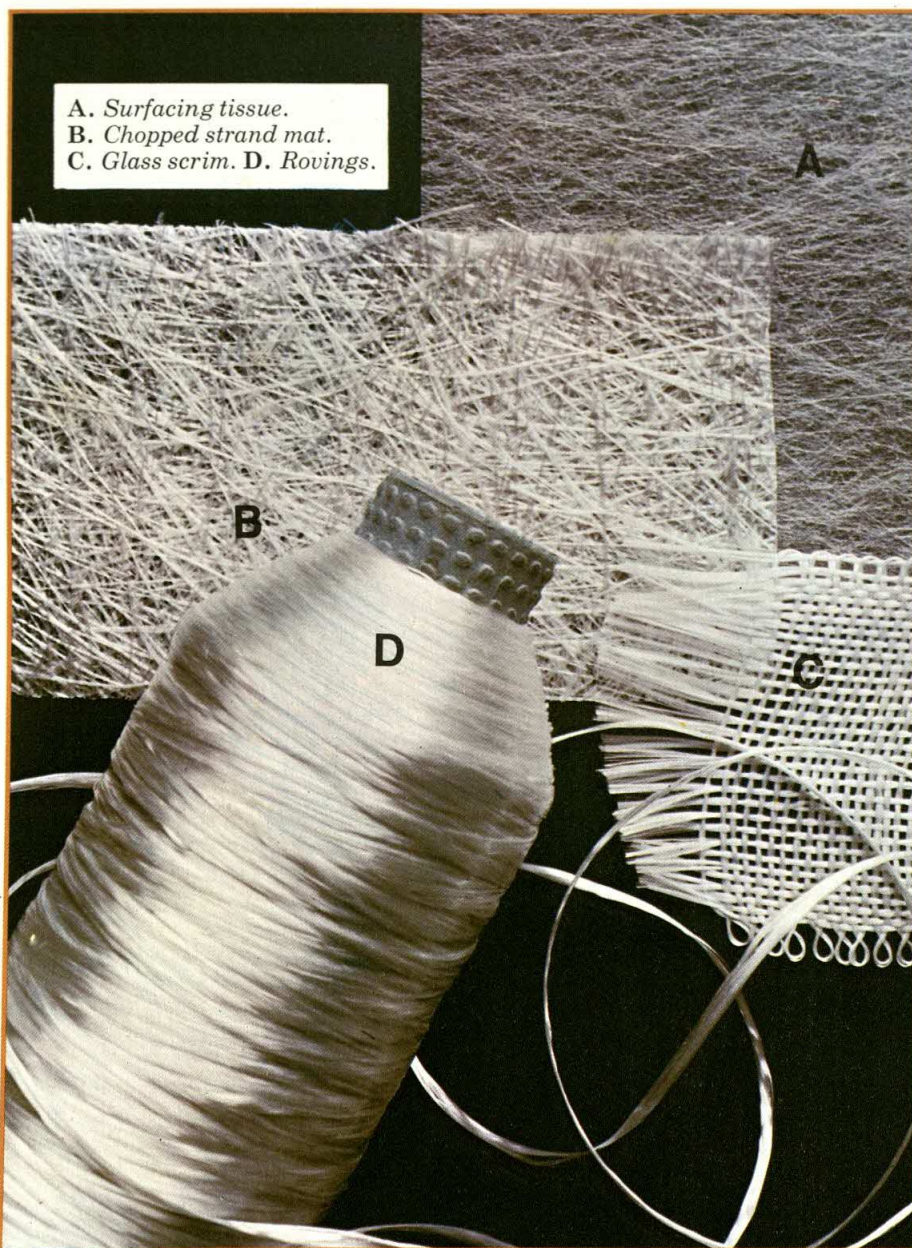
Safety

Glass fibre should always be handled with caution. The tiny, sharp fibres can float around and penetrate the skin, causing dermatitis. They can also irritate the eyes and lungs if the material is not used with care.

Always wear old clothes or an overall when working with glass fibre. Cover all exposed areas of skin with barrier cream, making sure that the cream is well under the nails. If your skin is particularly sensitive use rubber or thin plastic gloves as an added precaution.

If you are using mechanical polishing equipment (though this is unlikely for small projects) avoid breathing the dust or getting it in your eyes. Wear goggles and a mask.

Cover the working surface with newspaper and lay down newspaper in the surrounding area. Carefully fold up newspaper after use and discard. Vacuum all surfaces whenever you pack up for the day; the fibres can easily escape a simple dusting.

Never work in the kitchen as you may later ingest the fibres.

Store glass fibre in a closed container and do not allow it to get damp. In addition, remember that resin fumes can be toxic so keep the room well ventilated and all windows open. Resin, in particular, should be kept away from naked flames and stored at a cool temperature.

Making a tray

If you have worked with polyester resins before, such as in making some of the projects described in previous chapters, you will be familiar with many of the materials and techniques used to make a glass fibre tray.

Tools and equipment

Resin laminating brush, or an ordinary paint brush (which is similar), to apply the gel coat and stipple the resin into the glass fibre. A 25mm (1") brush is large enough for a tray.

Laminating roller to remove air bubbles from the impregnated resin. This tool is equipped with ridges along the roller part which ensure that the fibre is thoroughly impregnated. Buy a roller about 10cm (4") wide. You can

1. *Make your own roller.*

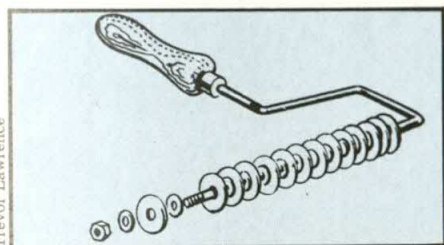make a roller from steel washers and an old paint roller (fig.1).

Scissors for cutting the glass fibre to size and a trimming knife such as a Stanley knife for trimming the edges of the shell before the resin has set hard.

Clean, empty tins for mixing the resin. Disposable calibrated paper cups for calculating amounts of liquid.

Smooth stick, flat wooden spoon or palette knife for stirring liquids.

Plastic or wooden spatula for easing tray from its mould.

Flat, medium-grade file (suitable for brass work) for smoothing edges of tray.

Medium and fine silicon carbide abrasive paper.

Lint-free cloth for applying wax.

Small sponge for applying polyvinyl alcohol.

Two soft polishing cloths.

Overalls or a good apron. An effective apron can be made from a sheet of polythene.

Barrier hand cream to protect against sharp fibres (rubber or PVC gloves if skin is sensitive). Newspaper.

Materials

The quantity of materials given is generous for an average-sized tray, say, 60cm x 45cm (2'x1½').

You will need:

Chopped strand mat, about 1.8m (6'), or just over four times the size of the

tray. The mat is sold by weight so ask for a 300gm weight (300gm per square metre, or 1oz per sq ft).

Surfacing tissue, about 45cm (18"), or the size of the tray.

Rigid laminating resin with 10% thixotropic paste already added. The paste makes the resin thicker. This type of resin, already mixed with paste, is standard for much glass fibre work. You will need about 1.8kg (4lb).

Resin pigment. Choose one colour (for simplicity's sake) for your first glass fibre project; about 28gm (1oz).

Catalyst (hardener), comes in 56gm (2oz) bottles. You will need most of this for a tray but follow manufacturer's instructions.

Emulsion wax release agent comes in a tin and is a synthetic wax used to polish the mould.

PVA (polyvinyl alcohol) release agent is also sold in tins and is spread over the mould on top of the wax.

Metal polish such as Brasso.

Acetone and polyester resin detergent for cleaning tools. Acetone is inflammable and the fumes are toxic.

A mould such as a wooden, metal or plastic tray. The tray should be simply designed with no undercuts on the top surface (otherwise the glass fibre will be impossible to remove). Modern trays are often designed so the top and bottom are exactly the same design. In this case the tray can be used straight away without the necessity of producing a mould.

Varnish, such as polyurethane varnish, to seal the surface of the tray if it is made of a porous material such as wood. In this case include another 25mm (1") paint brush.
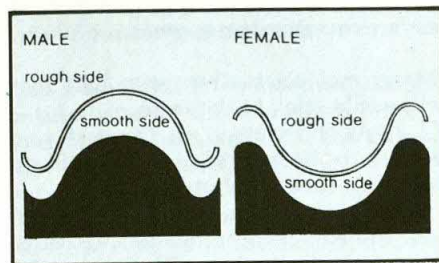
□ Open the windows to ventilate the room.

□ Lay newspaper over and around the working surface and have all the materials, tools and equipment to hand.

□ Put on an overall or apron and cover skin with barrier cream.

To make a mould

The mould can be one of two types as

2. *Each mould—whether male or female —produces an exact copy in negative.*

shown in fig.2. The negative or female mould is recessed and used for articles that need to be finished or smooth on the convex side. The positive or male

mould is domed and the finished side is on the concave surface of the shell.

In this case the existing tray is used as a female mould (ie the inside of the tray is coated with glass fibre). If, by good fortune, your chosen tray is the same design top and bottom you can use it as a male mould without having to make another initial mould. If you do this, halve the quantities of materials needed for the tray.

Of course, once you have made a male mould you can use it again and again to make as many trays as you want.

□ Wash the tray in warm water and detergent and dry thoroughly.

□ If the tray is made of a porous material seal the upper surface with a thin coat of varnish. Be meticulous about covering the whole surface otherwise the release agent will soak into the tray and the glass fibre will stick.

□ Sparingly apply the emulsion wax over the upper surface of the tray. Add a little water to the wax, if necessary, to make it spread more evenly. After the wax has dried polish with a soft cloth until all swirl marks are removed and the surface has become smooth and shiny.

□ If the tray is being used for the first time as a mould apply at least three coats of wax allowing two hours between each coat and polishing each time. Every time the tray is used as a mould you should polish (but not wax) to make the surface smooth.

Once the wax has dried it is hard and waterproof.

□ After wax polishing apply a coat of PVA release agent using a small sponge. The wax surface must be protected every time the tray is used as a mould by a thin coat of PVA; apply in a dust-free atmosphere otherwise small specks will show up on the finished mould. Every part of the upper surface of the tray should be covered otherwise you may have difficulty in removing the mould.

The gel coat. Using a brush apply a thin layer of resin to the tray.

The gel coat should be about 3mm (⅛") thick.

□ Weigh out 226gm (8oz) of resin.

□ Add the pigment to the resin, a little at a time, until you find the right depth of colour. This stage is not strictly necessary when making a mould but it will give you practice in mixing the pigment and this will be useful when you make the actual tray.

□ Add the catalyst, 9-10 drops per 28gm (1oz). If in doubt as to the amount of catalyst to use follow the manufacturer's instructions.

□ Apply the catalyzed resin to the inside of the tray in a thin, smooth coat. Use a laminating brush or paint brush and wash the brush in acetone after use. The resin should gel in about

3. *Using a wooden or plastic spatula ease the moulding away from the tray.*

4. *The new mould becomes the male mould from which the final tray is made.*

5. *Apply the wax release agent and polish to remove smears and unevenness.*

9. *Paint on the gel coat in a thin layer. This will hide the glass fibre.*
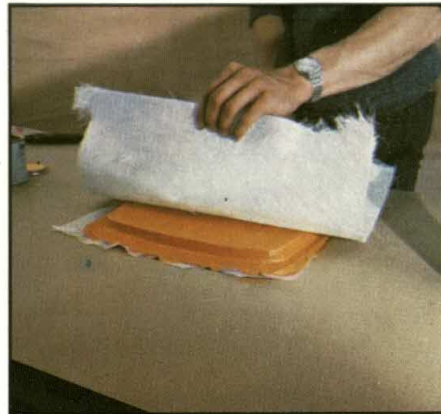
10. *Carefully place a layer of chopped strand mat over the gel coat.*

11. *Apply resin over the glass fibre and stipple into the mat with a brush.*

15. *The final trim: complete this stage immediately after the rough trim.*

16. *When the resin has set prise the two surfaces away with a spatula.*

17. *Separate the tray from the mould— the mould can be used again.*

an hour given average room temperatures, 19°C (67°F).
Laminating. Cut two pieces of chopped strand mat and one piece of surfacing tissue (not strictly necessary for the mould) equal to the area of the tray plus a little bit extra all round. When the gel coat is still tacky it is time to start laminating.
☐ Mix up 700gm (1lb 8½oz) resin with 200 drops of catalyst as before and apply over the gel coat with a brush. Don't use all the resin at this stage, just enough to make a thin layer.
☐ Carefully lay a piece of chopped

strand mat on to the resin. The mat will easily stick to the resin.
☐ Apply more resin to the mat and work into the mat using the brush in a stippling (not brushing) action.
☐ When the resin has been worked into the mat use the laminating roller to remove air pockets. Work from the middle of the tray to the outside. It is important to disperse all air pockets (which show as white patches) otherwise they may later burst and create small craters. Work right up to the edges of the mat.
☐ Be particularly careful at corners.

If necessary cut the mat and tease out the fibres until they meet. The corners may be initially stiff but will soften up when resin is applied.
☐ Add another layer of mat and repeat the process until the glass fibre is thoroughly impregnated with resin. The intention is always to use the minimum amount of resin for the mat to be impregnated.
☐ The last layer is the surfacing tissue to create a smooth surface over the rather rough chopped strand mat. Like the pigment this stage is not necessary when making a mould, but

6. *Next, thoroughly cover the mould with polyvinyl release agent.*

7. *Pour a quantity of resin into a container and add the resin pigment.*

8. *Add the catalyst or hardener following the manufacturer's instructions.*

12. *Remove air bubbles by firmly rolling over with a laminating roller.*

13. *Surfacing tissue is the last layer and gives a good finish.*

14. *At gel stage cut off the superfluous glass fibre with a trimming knife.*

18. *File down the edges of the tray and follow with silicon carbide paper.*
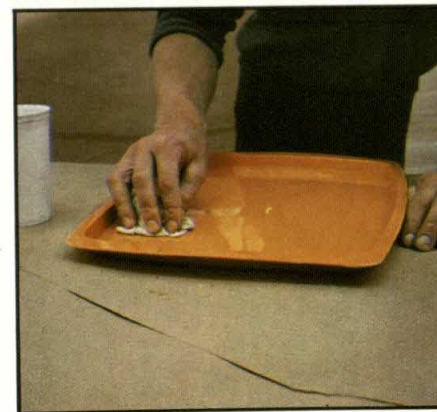
19. *Finish off by polishing with a metal polish for a good, shiny surface.*

20. *The finished tray: simple, strong, attractive and hard wearing.*

Mike Benson

it gives a better finish for the final tray.

□ Wash the brush and roller with acetone, then resin detergent and warm water. Allow to dry thoroughly.

□ When the mould starts to gel trim the mat level with the side of the tray using a trimming knife. If you do not trim at this stage you will later have to do so with a hacksaw.

□ Allow the resin to set; this will take at least twenty-four hours. A full cure takes about a week.

Release. When the mould is cured it is time to separate the two components.

Push a smooth, flat wooden or plastic spatula between the two edges (fig.3). Once air has been admitted the pieces will separate easily (fig.4). Don't use a metal tool as it may scratch the glass fibre. The remains of the PVA will leave patches on the mould but this can easily be wiped clean.

The tray

When you have removed the shell from the mould you will have a tray but the top surface will be rough and the smooth side, with any pattern, will be underneath.

To produce your tray you have to repeat the whole process described above, using as a mould the glass fibre shell you have just made (figs. 5-20). The only difference is that you will lay the glass fibre over the bottom or smooth side so that the final product is the right way round.

Finishing. Even though the edges of the tray have been neatly trimmed with the knife you should still file them down and follow with medium then fine silicon carbide paper.

Polish the finished surface of the tray with a metal polish such as Brasso.

1017

The versatile Turk's head

The Turk's head is one of the most versatile decorative knots and was used originally on sailing ships to decorate nautical equipment. It is a freestanding knot made from one length of yarn and has a plaited appearance.

When it is made as a ring or loop it can be tightened around ropes or braids to make a neat finish or it can be worked to any diameter to form a bracelet, scarf or napkin ring, or a frame for a mirror or picture. Made flat it can be used for tablemats, coasters or as a soft buckle or frog fastening for clothes or bags. Pulled tight it can be used as a knob for fastening a belt or as a button.

The yarns. The easiest yarns to use for the Turk's head are those which are flexible but not too floppy. Medium-weight ropes and cords made from natural yarn, such as manilla, sisal, hemp and cotton, can all be used although they can discolour and deteriorate if they are subjected to damp conditions.

Man-made yarns, made of polypropylene, polyester (such as Terylene) and nylon, are ideal because they are easy to use, can be washed and are available in a variety of weights and colours.

The knot size. The knot can be made into any size you like. For a small knot each strand should be twisted in and out three times; these are known as tucks. For a larger knot, such as for a coaster, you should make five tucks to form a firm knot and for a tablemat you would probably need seven or even nine tucks. The tucks are always formed in odd numbers in order to achieve the correct pattern.

The width of the knot is determined by the number of times the yarn is passed round the foundation; each circuit is known as a part.

Using a jig. It is advisable to finish each knot by tightening it around a jig to ensure it is right size. A jig is a solid foundation which should be of the same size as the internal diameter of the required knot.

It could be a piece of cardboard or plastic tube or even a household jar, if the finished item is in the form of a ring. If you are making a flat knot, you can make your own jig from layers of cardboard cut to the required size and mounted one on top of the other to make the jig 6mm ($\frac{1}{4}$") thick.

A few of the many uses of the Turk's head knot, designed by Ropecraft. The small knots, napkin rings and lanyard knob are made with three tucks and three parts. The coaster has five tucks and three parts and is finished with a Flemish coil, and picture frame has seven tucks and two parts. To give firmness to the finished articles, they are glued on to a solid foundation.

Turk's head knot

You will need:

Yarn, 2.7 metres (3yds) 3mm ($\frac{1}{8}$") diameter cord.

☐ Divide the cord into thirds. Loop the cord round the fingers of your left hand so that one-third is hanging down. Use the remaining two-thirds as the working end. Cross the working end to the left and trap under the thumb (fig.1, A).

1
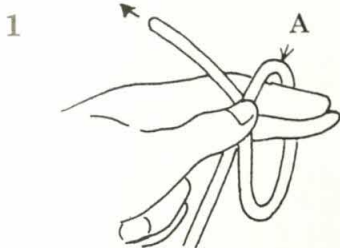
☐ Pass the working end behind the fingers again to form loop B (fig.2) and trap under the thumb. Adjust the loops so that they are slightly larger than the required diameter of the knot.
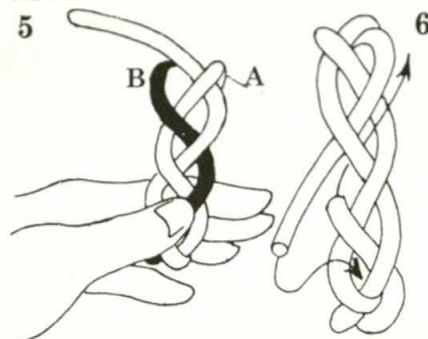
2
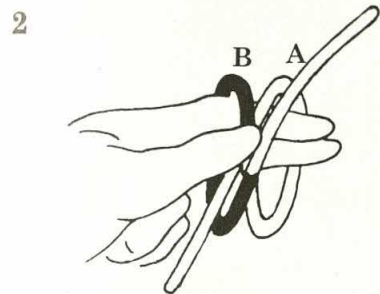
☐ Turn your fingers towards you and tuck the working end under loop A and over loop B to the left (fig.3).

3
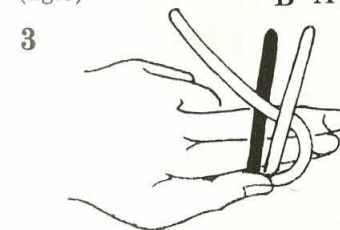
☐ Cross loop B over loop A and tuck the working end from left to right under A and over B (fig.4).

4
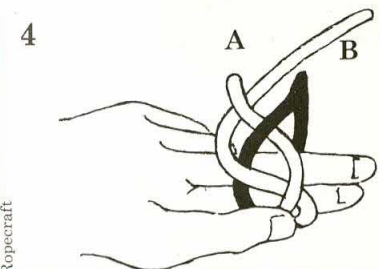
☐ Rotate the knot and cross loop B over A and pass the working end under A and over B to the left (fig.5).

5   **6**

This completes three tucks. Further tucks can be added in pairs by repeating this procedure of crossing the loops alternately to the left and right and feeding the working end under and over each time. The two ends should come out of the knot over and under their respective loops.

To work the second part, take the working end and feed it back into the knot under the loop from which the tail end comes out. Keeping to the right-hand side and parallel to the tail cord, weave the working end round the knot, following the windings until you have two strands all round.

To add a third part, repeat the procedure with the tail end, weaving it round the knot in the reverse direction until there are three strands all round (fig.6).

To make the knot smaller, place the knot around the jig to hold its shape and, pulling from the end with which you started, gradually ease the yarn through the windings to the end. Repeat the process if you wish to make the knot smaller.

To make a button or knob, continue tightening the knot until it forms a tight ball. Use the two ends as a shank for sewing the button to a garment and trim the ends close to the sewing.

To make a flat knot, hold the knot in both hands with the open sides at the top and bottom. Press up the lower edge of the knot into the middle of the ring with your fingers and flatten the knot with your thumb.

To finish the knot, cut the two ends so that they are hidden behind the windings. Place a little glue on the ends to prevent them unravelling. Tuck the ends behind the windings and leave until the glue is dry.

Turk's head coasters

To make one coaster with 11.5cm (4$\frac{1}{2}$") diameter:

You will need:

Yarn, 2.7m (3yds) 3mm ($\frac{1}{8}$") diameter cord for the Turk's head knot border. 0.91m (1yd) 3mm ($\frac{1}{8}$") diameter cord for the centre coil; 33cm (13") 3mm ($\frac{1}{8}$") diameter cord for the edge trim. (The yarn quantities are specified separately for each section as you may wish to make a multi-coloured coaster.)

Backing board, 3mm ($\frac{1}{8}$") hardboard or plywood cut to an octagon with a diameter of 11.5cm (4$\frac{1}{2}$") (see Design know-how chapter 8, page 224).

Felt for the underside of backing board, cut to the same size and shape.

Jig, cut to an octagon measuring 6cm (2$\frac{3}{8}$") in diameter.

Adhesive, such as Uhu.

☐ Apply the adhesive to the underside of the backing board and carefully stick on the felt.

☐ Place the edge trimming cord round the backing board. Check that it fits exactly and adjust if necessary. Glue the ends in a butt join. Apply glue thinly round the edge of the board and allow to become tacky. Press the trimming ring into position.

☐ Make a flat Turk's head knot with five tucks and three parts.

☐ Place the flattened knot over the jig and if necessary pull the inner end of the cord through the loops so that it touches the edge of the jig (fig.6).

☐ Holding this end down with your thumb, tighten the knot by working round the loops to take up the slack. All the strands should lie flat and parallel to each other. Do not over-tighten or the strands will bunch and cross each other. When all the strands are tightened and the inner edge of the ring fits round the jig, cut off the outer tail end.

☐ Apply the glue to the knot and allow it to become tacky. Apply glue to the section of the backing board to be covered by the knot. Remove the knot from the jig and press it glue-side down in position on to the board.

Finishing the centre. The centre can be finished with a Flemish coil. To ensure that the coil is the correct size, draw a circle of 6cm (2$\frac{3}{8}$") diameter on cardboard and mark the centre. Double back one end of the cord about 5mm ($\frac{1}{4}$") and place this end on to the centre of the card. Secure with a pin. Rotate the centre in an anti-clockwise direction, feeding the cord at a light even tension while keeping the coil flat on the card under the fingers of the other hand. When the coil becomes the correct size, insert a pin through the outer turns to secure it.

Spread adhesive over the coil and on to the board, allow to become tacky and place in position. Tuck the loose end under a strand of the Turk's head.

Designing with hexagons

Many people do not venture further than the hexagon in patchwork as this shape has the advantage of being the simplest to turn under and join neatly. But there is a great deal more to designing with hexagons than first meets the eye.

Colour, texture and design are all important in the creation of good patchwork fabric and nothing is more stimulating to good design than a wide choice of fabrics. So collect as many as you can by saving dressmaking scraps and sale remnants.

Colour

Patchwork patterns are built up from the colour and shape of the patches. When planning a pattern choose the colours and tones of your fabrics carefully, considering their relationship to each other. If the colour contrasts are wrong the pattern will be indistinct. Groups of patches in a strong colour can look extremely dramatic and will stand out far more than single patches or patterned patches of the same colour. Some colours will be affected by others next to them—red next to white will appear pink, while red and yellow together will give the impression of orange. Experiment with your colours and tones and vary the proportions you use, both patterned and plain, to see what effects you can achieve.

Working on a background. Many good patchwork designs are based on the careful planning of a pattern in relation to a background.

The background is usually made up of patches in a neutral, or linking, colour used between the groups of patches which form the pattern—black can make a most effective background. But patchwork can happily be combined with appliqué and groups of patches can be appliquéd to a background fabric.

Related colour schemes. Colours close on the spectrum can make very pleasing designs. If you choose blue, for example, you could use a variety of tones from sky blue to navy, adding tones of green and using turquoise to link the blue and green.

Two-colour schemes. Many successful patchwork designs are worked in only two colours, one light and one dark. White or natural is an obvious choice for the light colour, but more subtle combinations can be made by using a light and dark shade of the same colour.

Multi-colour schemes. If you have only just begun to do patchwork, it is often best to limit yourself to a few colours and tones as it is not easy to

A summery quilt made up of single rosettes using mainly blues and greens. This is a good example of a patchwork design with a related colour scheme.

bring order and design to a mass of different colours.

It is tempting to use lots of printed fabrics together but this can result in a confused look. Try mixing prints with a linking plain fabric which picks out a colour common to the prints.

Random schemes can look pretty, but they require some knowledge of colours and their relationship. They may also be time consuming as you will need to check frequently that the colours are well distributed throughout the patchwork and that no unintentional pattern is emerging.

For additional guidance on colour use see Design Know-how chapters 13-18.

Texture

Mixing textures is a good way of adding interest to a simple design or colour scheme. Some early examples of patchwork designs were worked on a white background which was made up from different white damasks, the difference in texture producing a subtle and intriguing variation of shade.

Design

When beginning a piece of patchwork, consider the size of the patch and the design you choose in relation to the size and shape of the article you are

A spectacular quilt which shows hexagons used in a number of ways including a large star centre piece, rosettes and an 'ocean waves' border.

making, for example use small hexagons for cot quilts. Then carefully select the fabrics you will use.

If the design calls for the extensive use of one particular fabric, make sure you have enough of that fabric before starting work.

A window template is a great help when cutting patches as it enables you to select the exact part of any fabric pattern you may need for a design.

As you make the patches, lay them out on a flat surface, preferably a piece of cork or soft board into which pins can be stuck. Use the patches like the pieces of a jigsaw, shifting and changing their positions until a pleasing pattern emerges.

Stick pins through the patches to hold them in place, making sure that the pins will not damage the fabric. Alternatively, make a rough sketch to remind you of their position when you sew them together.

A wrongly placed patch can mar the whole design, although it may not be obvious until quite a large section of the work has been completed.
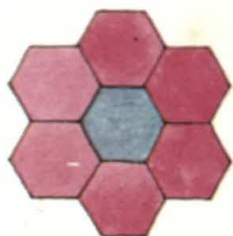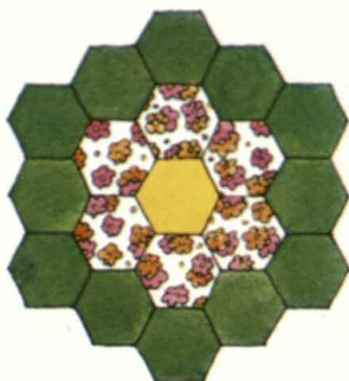
1. *Single rosette.*

2. *Double rosette.*
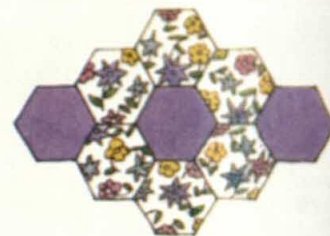
3. *Diamond rosette.*
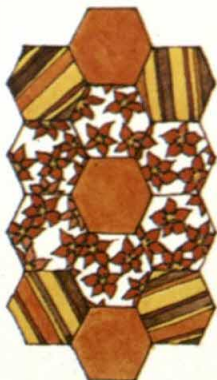
6. *Developed rosette.*
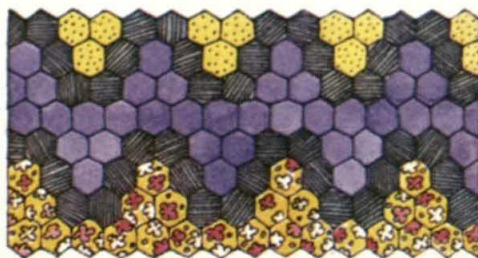
7. *Ocean waves A.*
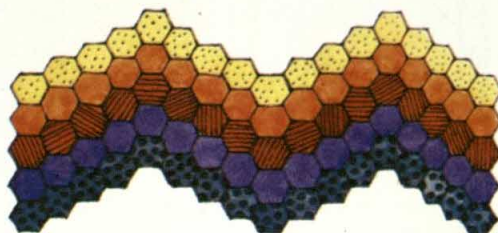
7. *Ocean waves B.*
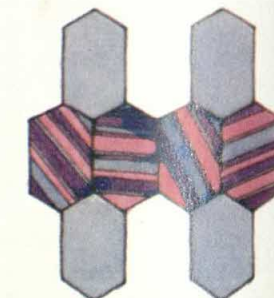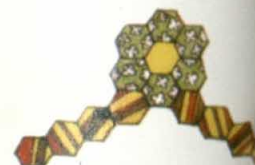
9. *Church window border.*

The rosette

This is a good basic design as well as an attractive way of using up small quantities of fabric. A single rosette is made up of seven hexagons (fig.1). The surrounding patches are usually made from one colour and if they are varied it is important that the colours or patterns of the patches combine to form a well balanced shape. Single rosettes can be linked quite simply by making each centre patch of the same colour. A second row of hexagons in another tone or colour can be added to make a double rosette (fig.2), and yet another row of patches makes a triple rosette.

Grandmother's flower garden.

This attractive, traditional design is made by using double rosettes in a rather special way. The central patch is surrounded by patches cut from a floral fabric and the second row of patches is cut from plain or printed green fabric, giving the effect of a large flower surrounded by foliage. The double rosettes are separated by lines of white or natural hexagons, which represent garden paths.

This is a good design to use on a quilt.

More ideas

A few basic pattern designs using hexagons are illustrated here (figs.3-10) but the possibilities are endless. Experiment with your patches and their colours to make many more.

Border designs

Hexagons can be used to make border decorations and motifs for items such as curtains, valences and bedspreads, skirt hems and tablecloths.

Ocean waves (fig.7) is a traditional border design and for the best results the fabrics should be of different tonal values, shading from light to dark.

All the designs illustrated, except the festoon (fig.10), can be worked as part of a whole patchwork fabric. Or, for a quicker effect, borders, motifs or even single hexagons can be appliquéd on to a background fabric.

Detail of a quilt made from double rosettes — an interesting variation on grandmother's flower garden.
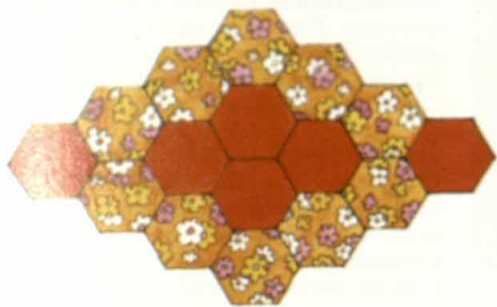
4. Elongated rosette.

5. Six-pointed star.

8. Garland.
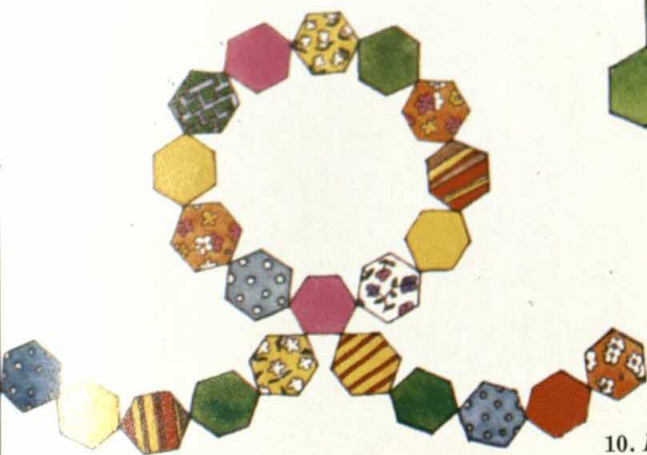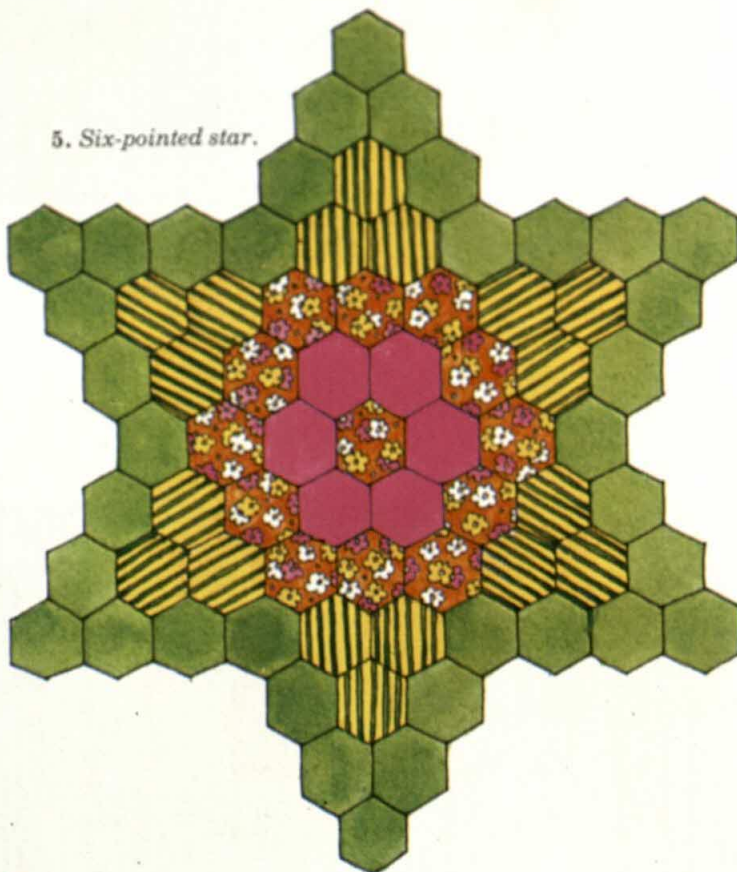
10. Honeycomb patches appliquéd in a festoon.

Variations on the regular hexagon

The 'church window' and the 'coffin' are both variations of the regular 'honeycomb' hexagon. They are formed by elongating the basic shape as shown.

Honeycomb

Church window

Coffin
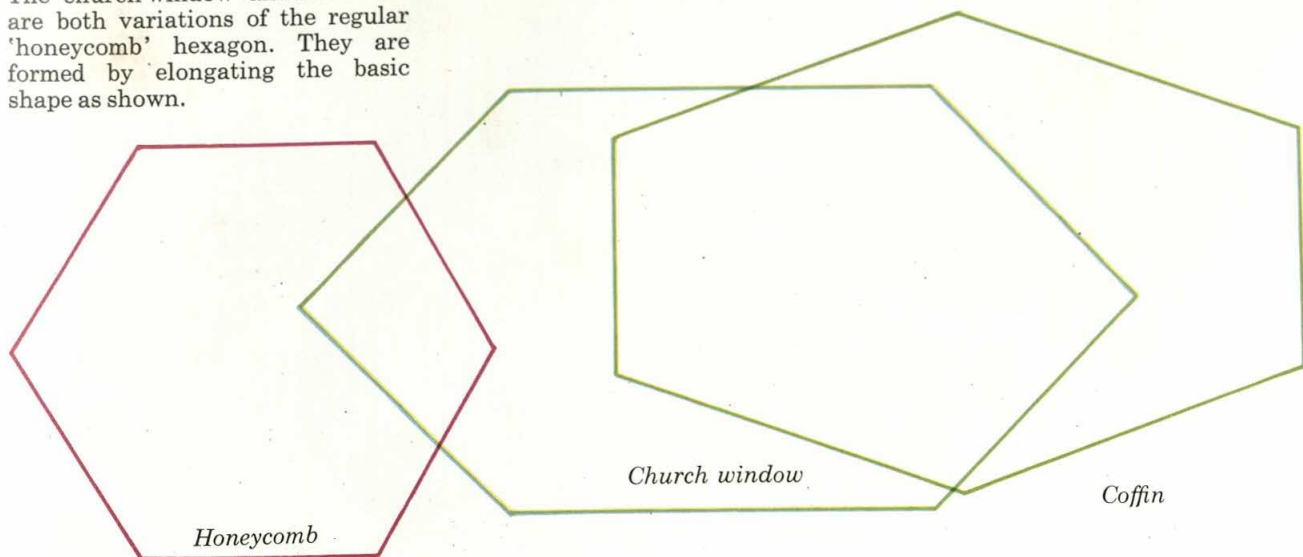
Practical ways with seeds
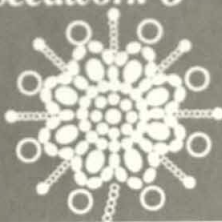
Seed collage is not just a means of making pictures. Almost any surface can be used as a base for seed design provided the glue is suitable for the base and the surface being used is one which will not be given too much harsh treatment.

If the surface is one which should be level, such as a table, then it may be necessary to split some of the seeds so that the height of all will be approximately the same. However, in cases such as this it is better to choose seeds that are already more or less the same height.

To split seeds: use a sharp knife and, if possible, hold the seed to be split with tweezers. Cut on a cutting board or similar surface and slice through the seed with the part of the blade nearest the handle.

Improvised containers

Containers like those shown in the photograph are good subjects to begin with since they can be made from throw-away objects. The vase was a humble washing-up liquid bottle and the two tins contained toffees and a cake. The candle holder was a goblet-shaped, plastic yoghurt carton which has been lined with metal foil and sprayed with a non-flammable spray for safety. Other disposable containers such as glass bottles, coffee jars and tins can all be used to make ornamental but useful objects as diverse as ciga-

Melvin Grey

Old cartons and containers become colourful ornaments when covered with seed mosaics. These are by Roger and Glenda Marsh.

rette boxes, cake tins and lampshades. If the container is already patterned give it a coat of emulsion paint before you begin so that any speck of background that shows through the seed collage will be neutral.

Mirror frames

This is an unusual and very decorative use of seed mosaic and frames can be cut from plywood like the one shown or you can apply seeds to an old mirror or from a junkshop.

To make the mirror shown you will need:

1cm (⅜″) thick plywood cut in a circle with a diameter of 80cm (32″) and a hole in the centre with a diameter of 40cm (16″) for the glass. This means the width of the frame will be 20.5cm (8″). Sheet mirror glass 46cm x 46cm (18″x 18″) and 3mm (⅛″) thick.

Tweezers.

Plastic strip for spreading glue.

All-purpose glue such as Copydex.

Sandpaper, carbon paper.

Clear gloss polyurethane varnish.

White or neutral emulsion paint.

4 mirror clips and screws, available from DIY shops.

2 screw eyes and picture wire.

Blue colouring for pearl barley.

227 gms (½lb) each of pearl barley, tic beans, yellow split peas, haricot beans, red or kidney beans, Cyprus tares.

4 walnut halves.

40 beech masts including casing and nut.

160 rose hips. 1 lb soya beans.

Seeds given may be substituted by others of your own choosing.

□ Sand the edges of the frame lightly and apply two coats of emulsion paint on both sides and on the edges.

□ If you are using the seeds listed, dye the pearl barley blue using either ink or food colouring as described in Seedwork chapter 2, page 1004.

□ Next, enlarge the section pattern (fig.1) to a width 20.5cm (8″) and, using carbon paper, trace it on to the front of the frame.

□ To lay the seeds, follow the key guide (fig.1). Work one section at a time, laying the design first and then the background. Lay the seeds as closely together as possible. The beech mast is laid by gluing the entire flower-like shape on to the plywood base.

□ Finish with two coats of polyurethane varnish.

□ To attach the mirror glass to the back, screw the mirror clips to the frame and clip in the glass.

□ Then screw in the two eyes. Wire and hang the mirror.
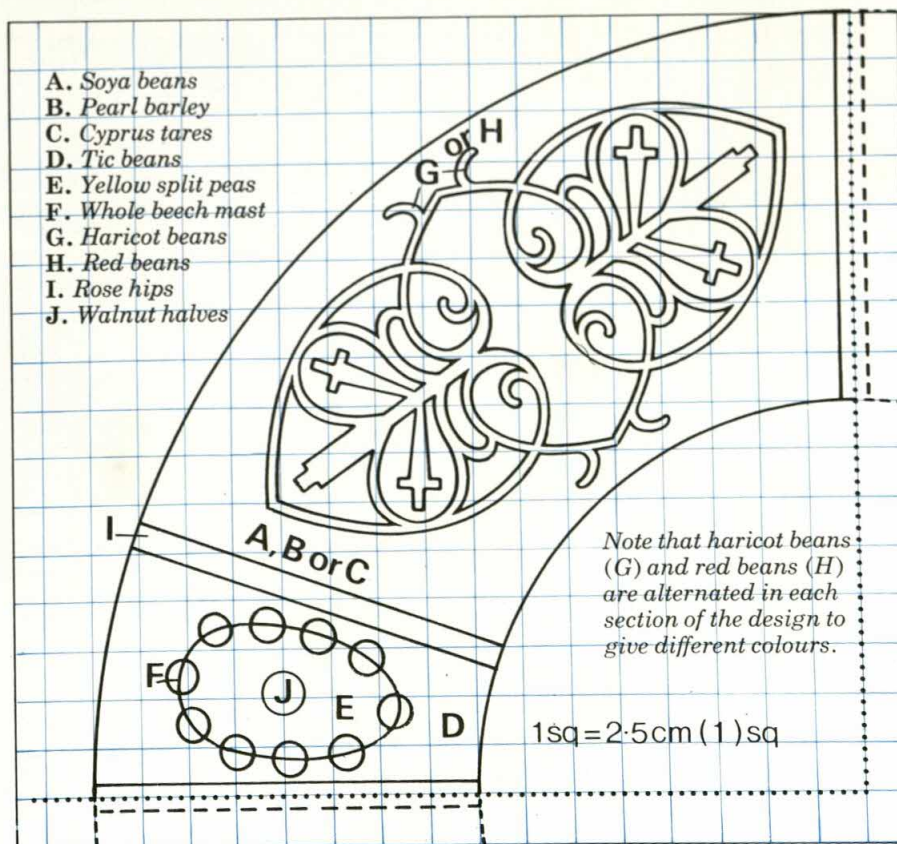
Top right: seedwork mirror frame made from plywood by Roger Marsh.

1. Section pattern for mirror design and guide to seed placement.

Steve Bicknell

A. Soya beans
B. Pearl barley
C. Cyprus tares
D. Tic beans
E. Yellow split peas
F. Whole beech mast
G. Haricot beans
H. Red beans
I. Rose hips
J. Walnut halves

Note that haricot beans (G) and red beans (H) are alternated in each section of the design to give different colours.

1sq = 2.5cm (1) sq

Trevor Lawrence

Mosaic tables

Tables with tops covered in seedwork are best put under glass like the one shown, but designs can also be worked on old table tops and then covered with at least three coats of polyurethane varnish. However, for uncovered designs of this type you should try to choose seeds which are roughly the same height when laid so that the surface will be as smooth as possible.

Finally, select a table that will not receive too much wear and tear.

The dimensions of the mosaic in the table shown are 62cm (24½″) x 45cm (18″) and the pattern given (fig.2) could be used in full or part to make a similar table.

The key (fig.3) shows where the seeds are laid. Those used here are as follows: dried peas, butter beans, red beans, haricot beans, mung beans, Cyprus tares, lentils, yellow split peas, Sudanese dari, paddy rice, rhubarb seeds, marrow seeds, gold of pleasure, rose hips, coffee beans. It is unlikely that any household would have all of these in stock but something similar can easily be substituted.

Work the design described previously. If you intend to cover the table with glass you will need to split the rose hips to make an even surface.
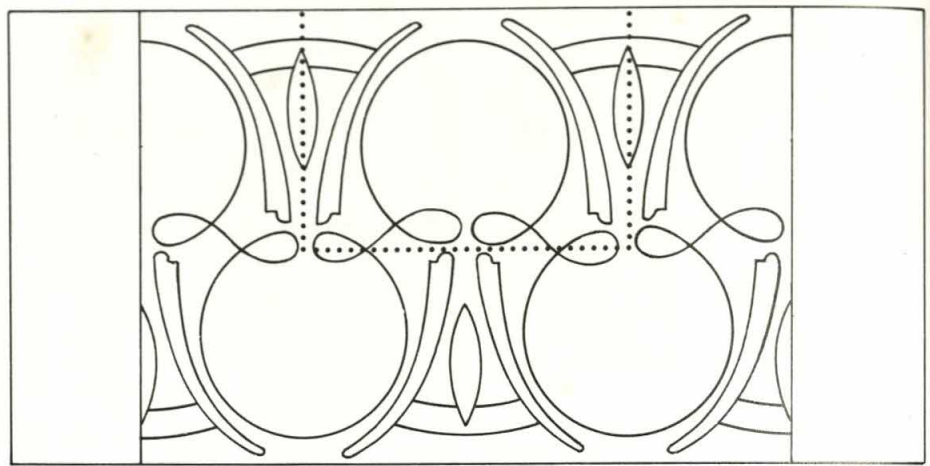
2. *Top: diagram of the table mosaic shown opposite. The pattern can be used in its entirety as in the photograph or a section could be used to cover a smaller table or other type of surface.*

3. *A graph pattern below is a section of the table mosaic design and a guide to seed placement. Since several types of seeds are used in the design shown however it is possible to substitute those given with seeds of your own choice or ones which you may find it easier to obtain. The table shown here was designed and made by Roger Marsh.*

A. *Dried peas*
B. *Butter beans*
C. *Red beans*
D. *Haricot beans*
E. *Mung or moong beans*
F. *Cyprus tares*
G. *Lentils*
H. *Yellow split peas*
I. *Sudanese dari*
J. *Paddy rice*
K. *Rhubarb seeds*
L. *Marrow seeds*
M. *Gold of pleasure*
N. *Rose hips*
O. *Coffee beans*
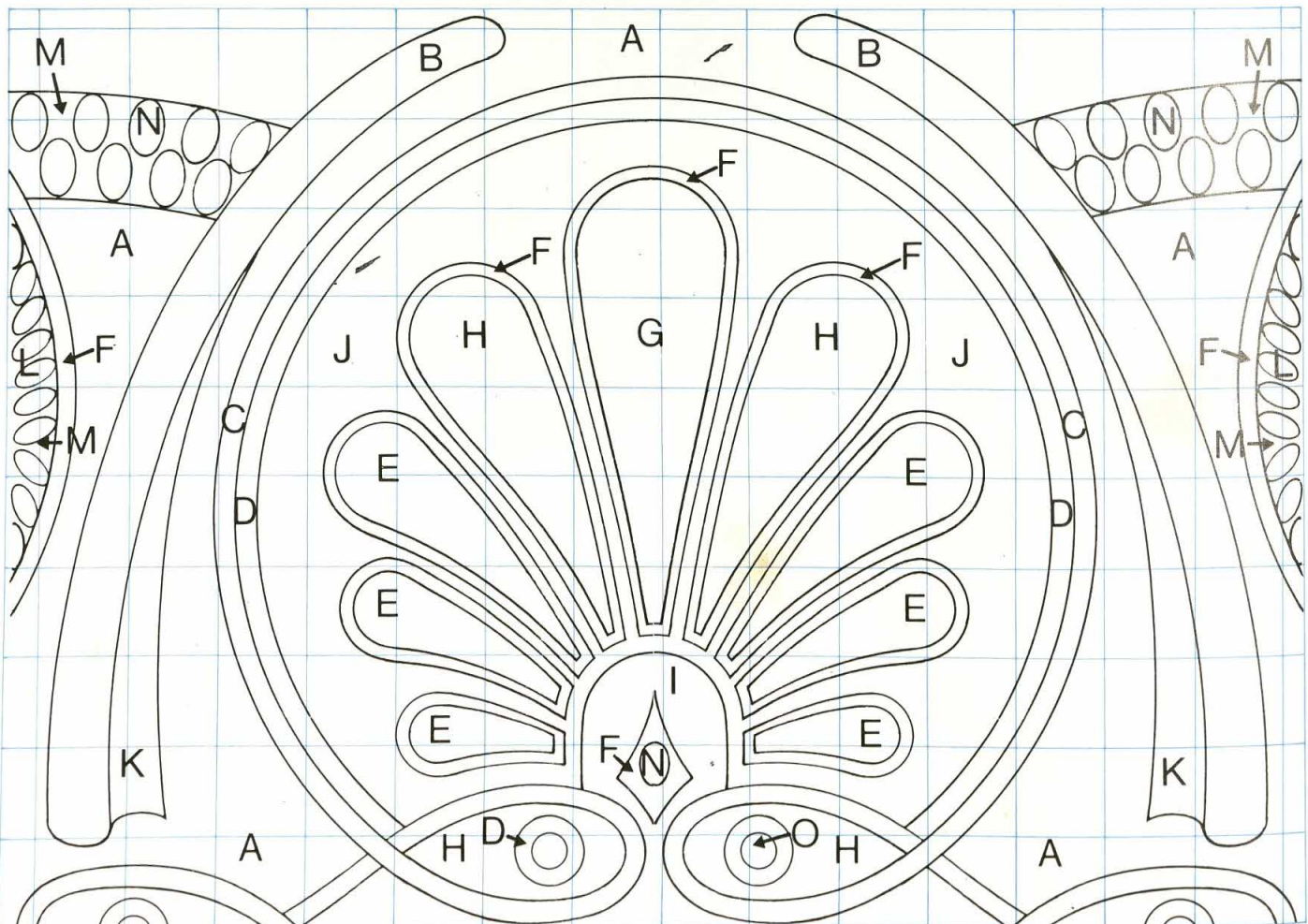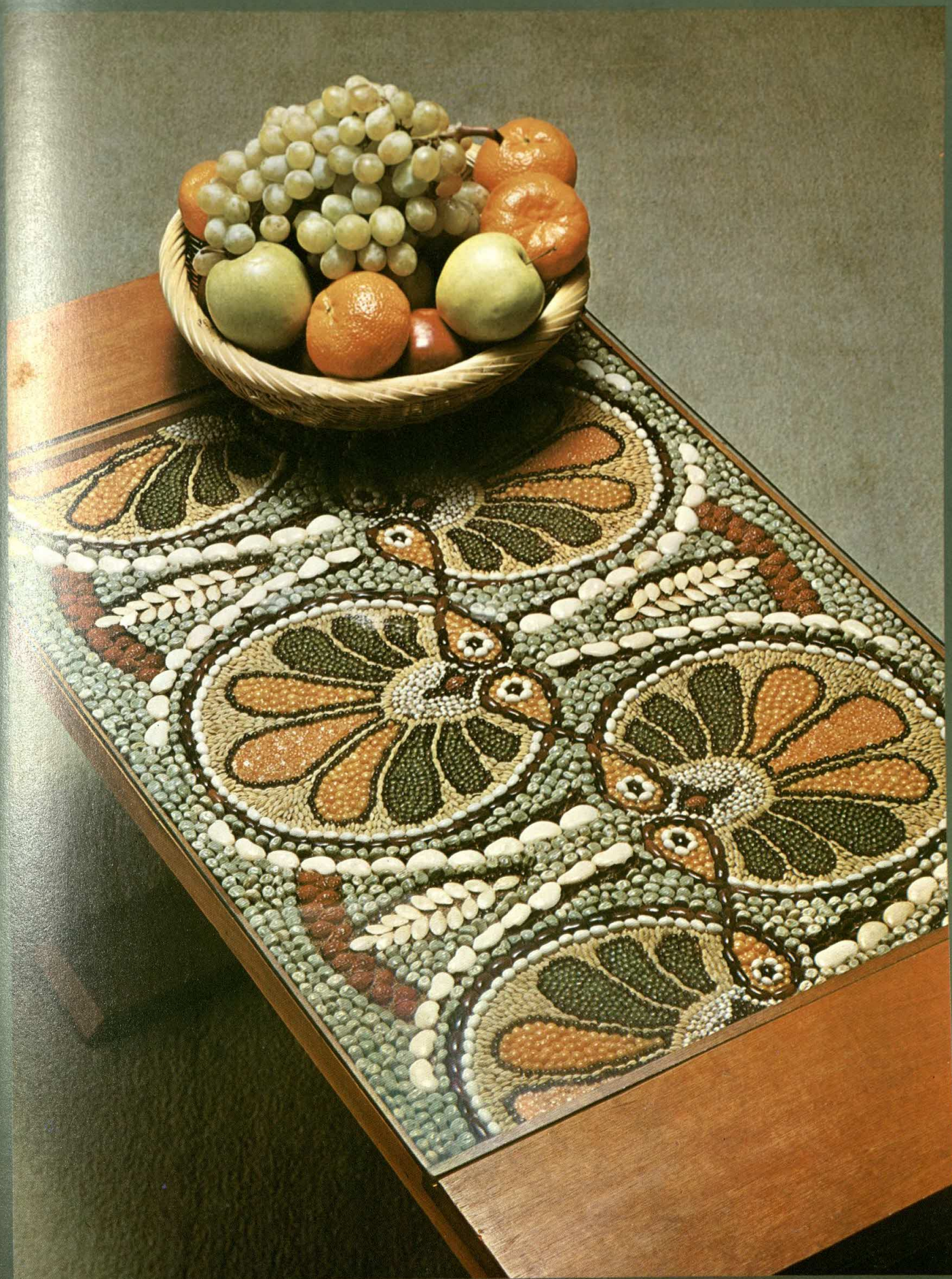
Screen printing: repeated patterns

Screen printing becomes considerably wider in its applications when more than one colour is used, and when the technique of printing repeated all-over patterns is combined with multi-coloured printing then the true scope of the craft becomes apparent. Fabric can be produced to match a favourite wallpaper or wallpaper can be copied on to furnishing fabric. Original de-signs can be printed for clothing, and you can decorate curtains, upholstery and linen to suit your personal taste and colour schemes.

Multi-coloured printing

To print more than one colour you need a separate stencil for each colour but this does not mean that you must possess more than one screen. You can print the first colour, remove the sten-cil and clean the screen, then proceed to apply the stencil for the next colour. If, however, you plan to do a great deal of screen printing it makes sense to have more than one screen.

Using multiple stencils. Figuring out which parts of a design to put on each

stencil for multi-coloured printing is comparatively easy. Make your design on paper in the colours in which you wish to print, then trace only those parts which are in the same colour on to each stencil.

Aligning stencils. When printing in more than one colour you must be able to fit the second stencil over the first printed colour so that it will print exactly the area you want and there are different ways of doing this. When printing more than one colour on single sheets of paper (to make decorative prints for example) you can take advantage of the margin to line up your second stencil correctly for printing.

Make two small, butterfly-like triangles in the top and bottom edges of the design and transfer these to the screen stencil (fig.1). The 'butterflies' will then print in the top and bottom margins of the first colour print. By including these registration marks in the stencils of subsequent colours the screen can be lined up properly by positioning it over the first 'butterfly' marks.

To align stencils on cloth or other materials where there is no margin it is necessary to use the chalk guides described in repeat printing below.

Overprinting (printing one colour over another) gives varying results depending on the type of colour you are using, so when designing for multi-coloured printing you must always keep this fact in mind. Screen printing inks can normally be used either opaque so that they cover exceptionally well or they can be rendered transparent with the addition of a solution called reducing medium. This gives them something of the quality of dye since the colour underneath is partially visible and affects the resulting hue.

A good way to design for transparent inks is to use bits of coloured tissue paper. By laying one colour over another you can get some idea of the effects of overprinting with transparent inks.

Dyes on the other hand tend to blend, and by overprinting, produce a third colour. This can, of course be used to advantage. By using yellow and blue you can make a three colour design, for instance, since any areas you wish to overprint will be green.

Multi-coloured designs. When designing for more than one colour it is wise to avoid butting two solid lines of colour against each other. The slightest imprecision will either result in a dark line of overprinting or a thin white
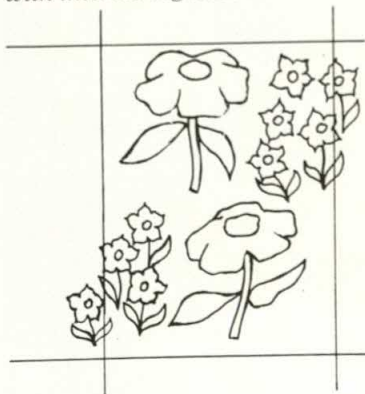
Matching multi-coloured wallpaper and curtain fabric by Ann Lomax was printed at home using two gloss paint stencils, one for each colour.

1. *Corner marks facilitate alignment.*

2. *Enclose design motif in a rectangle with intersecting lines at the corners.*

3. *Some motifs cannot be enclosed.*

Paul Williams
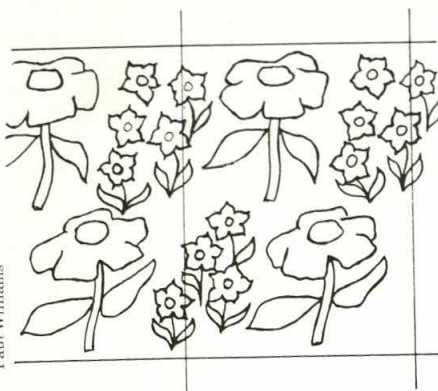
4. *Irregular motifs print as shown.*

line where the two edges do not quite meet. Commercial printers always try to avoid this situation.

All-over repeat printing

Repeated patterns on fabric, wallpaper or other surfaces require special planning. The motif must be evenly and successfully spaced and both the size of the motif and the amount of space between each must be considered. The width of your material to some extent governs the size of your repeat and the number of repeats you can have across the material since the motif must work out evenly across it.

Direction is another consideration. Patterns that are one-directional, such as a house design, must of course be printed in an upright position. Since these must be matched up if used on wallpaper, curtains etc., it is worth bearing in mind that a non-directional pattern—one that looks correct from any angle—is more economical.

Making repeat designs. Repeat designs are worked out on a grid system. (Design know-how chapter 9, page 252, gives additional guidance on making grids for repeat patterns.) First you must draw your motif full-size and enclose it in an accurately-drawn rectangle with each side extended so that it forms a cross at the corner (fig.2). Make sure that the motif is properly centred. This rectangle will provide the basic grid for the repeat.

When enclosing the motif you must also decide how much background you want to surround it. Bear in mind that the amount of space within the rectangle will represent half the background between each motif when it is printed.

Since the rectangle will be the total repeat area you must also figure out how many of these will go evenly across the width of the material. For example, a 90cm (36″) wide fabric might have three 30cm (12″) motif squares or it could have six 15cm (6″) ones—any number that divides evenly. It is advisable to work a section of your repeat by tracing the motif several times on a large sheet of paper to see just what your finished print will look like in repeat.

Irregular motifs. Not all motifs fit neatly into a square yet you must always work within a grid pattern. This means that in some cases part of the motif will protrude beyond the lines of the rectangle (fig.3). Often by having a wiggley line as a pattern edge it is easier to print, since straight lines are more likely to emphasize overprinting or other errors. Irregular motifs can be worked just like regular motifs so that when the rectangles are butted up against each other the design flows continuously (fig.4).
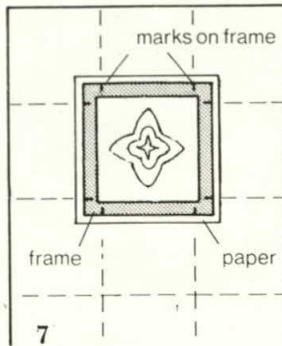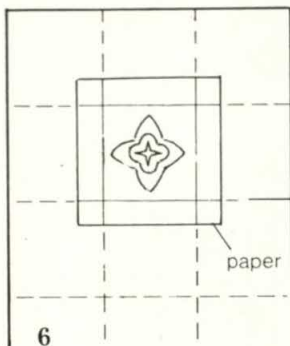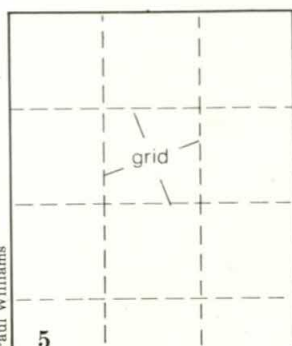
Top left: repeat designs are printed in alternating sections. Making the finished print is shown above.

5. To make an all-over pattern on fabric you must mark out a grid on the material and make each rectangle the size of the rectangle which encloses the design motif.

6. Position the screen to print by laying the paper design enclosed in a rectangle on a rectangle on the grid.

7. Put the screen on the paper and mark the screen where grid lines fall.

Preparing material for repeat printing. Once your design is worked out on paper and enclosed in a rectangle of the appropriate size you must make a grid on the material you wish to print which will match up with the design rectangle.

First prepare your work table by stretching the material out as described in Printing chapter 14, page 1000. If you are printing paper you will not need a blanket beneath and you can tape the edge in place with low tack masking tape.

Use as large a work table as possible so that you can print a great deal of the material in one go.

Divide the material on the work table into a grid of rectangles the size of your motif rectangle (fig.5). Use tailor's chalk which will brush off later. Mark the sections with a straight edge or carpenter's square. If the material is larger than the table you must wait until you have printed the area on the table before releasing it and proceeding to the next length.

For wallpaper you can allow for a selvedge which must be trimmed (as all handblocked wallpapers do) or dispense with this if you prefer. Often the position of the screen can be marked along the selvedge, however, and the grid is not necessary if the paper is no broader than two screens.

For multi-coloured printing you must print the entire material with one colour and then start again, if you have only one screen at your disposal. If you have two then you can print the area on the table in the second colour before proceeding to the next length.

Positioning the screen to print. Put your original paper design enclosed in a rectangle on the material so that the lines of the rectangle lie on the lines of the chalked grid (fig.6). Lower the screen with the stencil on it so that the screen stencil exactly fits over the design. (If working on cloth, you can tape the paper design to the cloth to steady it.) Then mark with a felt pen on the screen *frame* the places where the grid lines touch it (fig.7). This will be your positioning guide each time you print.

Multi-coloured stencils (fig.8) are lined up in the same way by positioning the second stencil over the first so that it falls in the right place and the guidemarks can be made.

Remove the paper pattern and you are ready to print. Because it is difficult to see the registration marks on the far side of the screen it is useful to get someone to help you line it up and hold it still while you squeegee.

Always print in alternating sections as shown so that recently printed areas have time to dry.

8. *Trace pattern for dress design.*

Distressing and colouring wood

Painted antiques are very often beyond the means of the average family. However, for people who prefer the look of furniture and accessories from the past, it is possible to add a painted finish with an antiqued appearance. If the paint is applied with skill and discretion to a piece of furniture it can be transformed from an eyesore to something which blends with the colour and atmosphere of any particular room.

One of the great advantages of antiqued pieces is their ability to blend with traditional and modern décor. Furniture can be coloured to match or blend with existing colour schemes. Interior decorators in America and Europe have been using the process for many years, having realized its potential in giving a room an interesting mellow ambience.

Ageing and antiquing furniture is a fascinating field to explore. It is not only for professionals—excellent results can be achieved by the beginner who is willing to experiment and practise the processes involved. The difference between a professional and an amateur is that a professional can look at a piece of furniture and antique it successfully without first doing tests on bits of wood which a sensible amateur should do to ensure first class results. The materials required are inexpensive and considering the results it is time and effort well spent.

What to antique

A piece of furniture that you would like to get rid of, but keep simply for its usefulness, is the ideal item to antique.

To apply the process it is important to remember that some items are more suitable than others. As a general rule very new and plain undecorated items are best avoided. The process does not lend itself to the decorating of large flat surfaces such as plain wardrobe doors or large flat table surfaces. It is best applied to surfaces that have interesting texture and grain. Carved or decorated panels, picture frame mouldings, mirror frames, are all ideal as are bedroom chairs, small tables, magazine racks, wooden chests and boxes. The more ornamental and interesting the shape the better the finished result will be.

Secondhand furniture stores, bric-a-brac shops and junk dealers can yield some very useful pieces. Concentrate on the shape and detail rather than the existing colour or finish—you will be pleasantly surprised when such items are transformed with antiquing.

Preparation

The process can be applied to all wooden objects and surfaces. If the item has been varnished or painted it must be rubbed down with glasspaper or fine steel wool. The surface gloss must be removed but the actual paint can be left providing it is not flaking or badly chipped. Remove metal handles and hinges before starting the process.

Distressing techniques

To give an authentic appearance to some pieces there are various methods of denting, scratching and adding blemishes normally found on old furniture. These methods are known as distressing and if used carefully lend interest to new or uninteresting surfaces.

Old furniture seldom has well defined corners or edges. Wear and tear have worn away the surface leaving slightly rounded corners and edges. This can be achieved by filing or rubbing the edges, or using a Surform tool to remove square edges. Finish off the surface with fine grade glasspaper before adding colour.

Dents can be added by hitting the wood with a blunt object such as a heavy pebble or brick, or with light blows from a hammer. Don't overdo this and don't break the furniture!

Hollows can be gouged with a round file and the edges can be chipped with a chisel.

For a natural appearance scrub the surface with a strong solution of bleach to clean and whiten it. Tiny holes can be bored into the wood surface or hit nails into it and then pull them out again.

Do remember that if any of these processes are overdone it is inviting trouble. Restraint and an appreciation of the fact that age changes things slowly—warping, fading and wearing away gradually—will help to avoid overdoing the processes.

The distressed surface can be varnished—matt finish is preferable—or you can wax it.

To make it more interesting add some colour to the outer edges of the object and leave the interior parts natural or bleached. Wipe some wood stain or shoe polish along the edges and then smooth it so that it fades as it spreads away from the edges. The applied colour must not have a hard line—rub it quickly once you have applied the colour or if this does not work rub the colour line down with a piece of fine grade glasspaper to fade it gradually.

Varnishing

A high gloss finish can be applied if required but it is out of keeping with an antiqued surface. A matt varnish which gives a dullish sheen is preferable. Apply the varnish carefully with a soft brush and don't forget to cover recesses and unseen areas. Apply two coats in a dry and dust free atmos-

Dick Miller

Above: detail of distressed and coloured wood. The 'cracks' are made by gouging a groove along the grain with a large nail. The corners are rounded with a file. Right: the completed sewing box. Designer Alan Wheeler.

phere for a smooth finish.

As an alternative to varnish, wax furniture polish can be rubbed all over the surface and then buffed up with a soft polishing rag. This gives a lovely sheen but it must be remembered that the surface is not waterproof and will not stand a great deal of wear and tear.

Colouring

This is the most exacting part of the process. The surface is painted with a base coat and finished with a glazing coat of paint. The process can be done with a brush or dabbed on with a piece of sponge.

You will need:

Emulsion paints—use a colour lighter than the final shade required, for the base coat.

Poster paints or tubes of suitably coloured water colours—to darken the paint for the second application.

Matt or eggshell varnish, or polyurethane.

Paint brushes.

Pieces of sponge or foam rubber.

Clean soft rags.

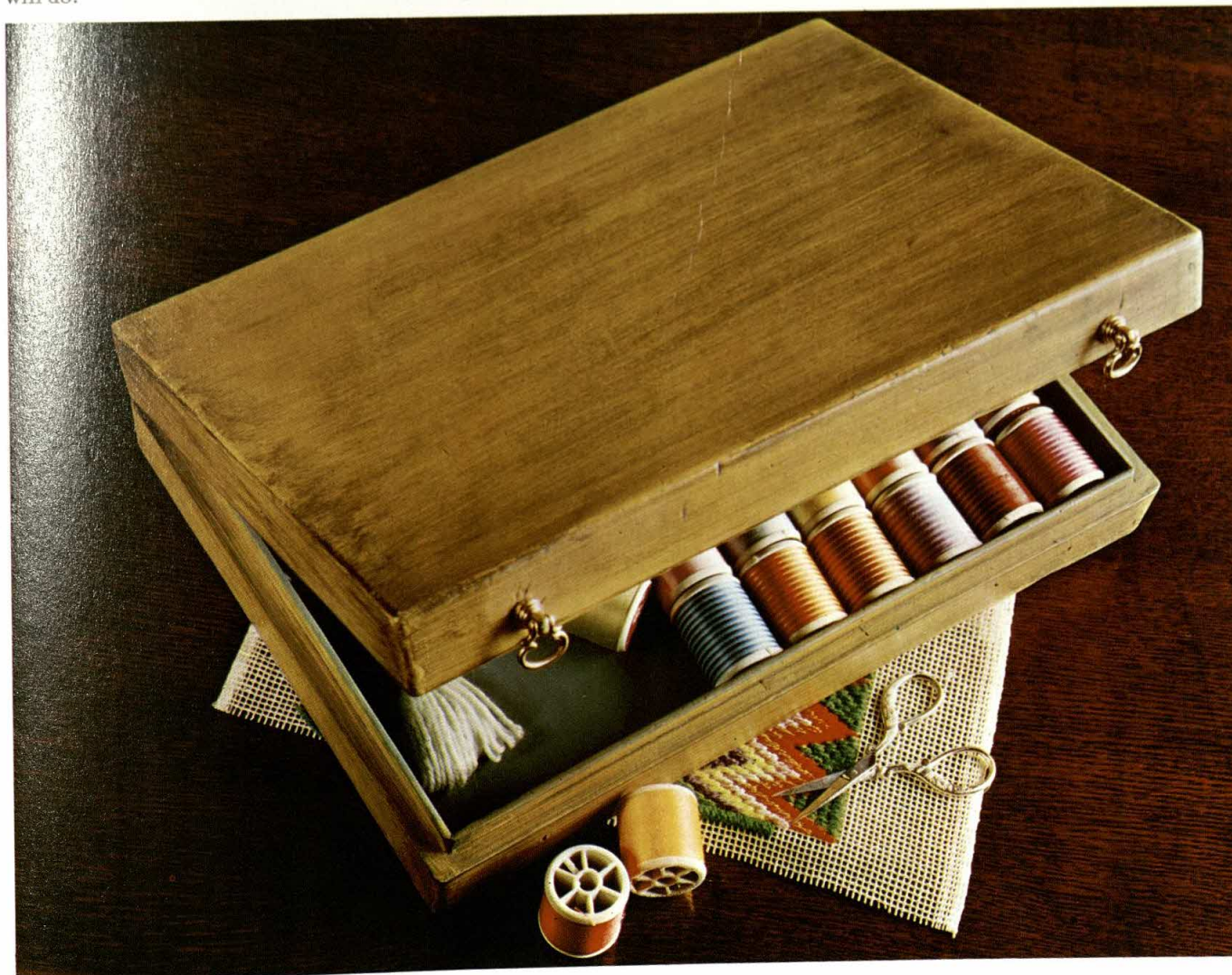Dishes for mixing paints—old saucers will do.

Rob Matherson

Roy Duns

Above: sample of distressed wood before colouring. The bottom half of the green sample is varnished.

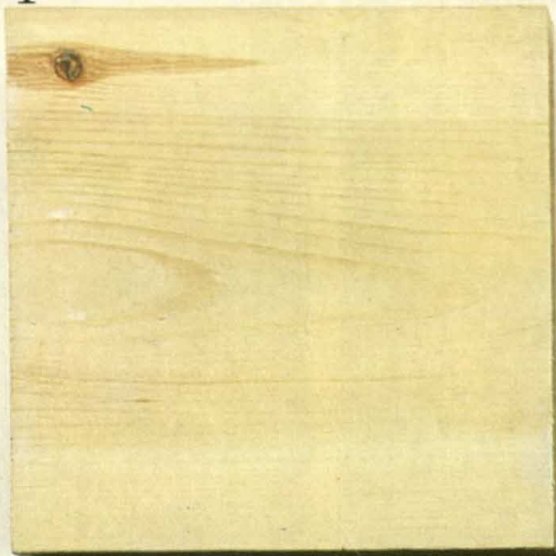*Above: an attractive piece of wood can be distressed and left its natural colour. Polish or varnish it to finish.*
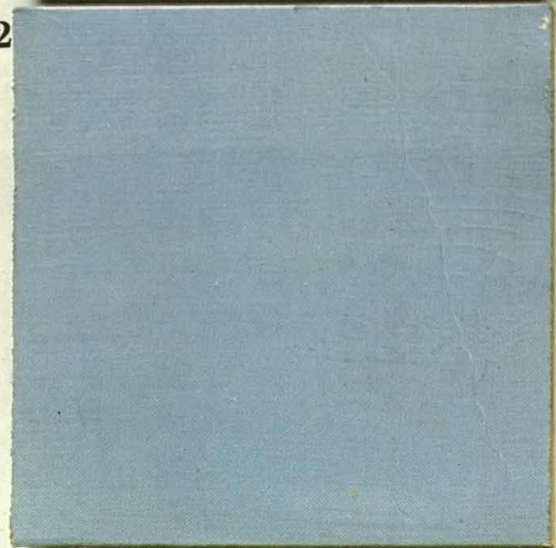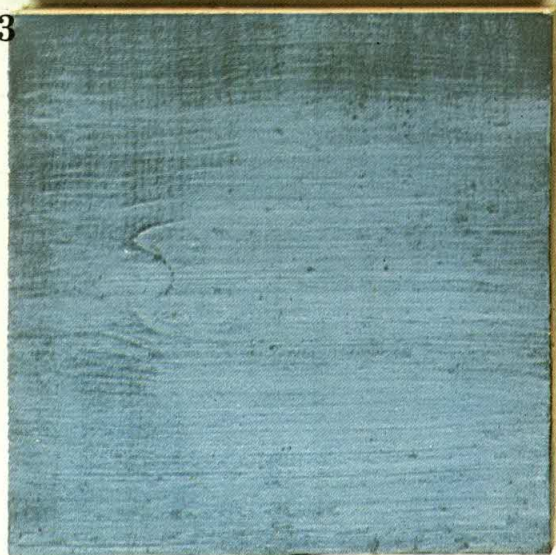
Rob Matherson

1

4

7

2

5

3

6

Base coat. Apply a base coat to the prepared surface. Use a lighter shade of the emulsion paint than the final colour, for example use beige if you want the finished article to be a medium brown.

Apply this coat to cover the surface well but not too thickly.

Two thin coats are preferable and brush the paint well into the wood to keep the grain texture visible.

Glazing coat—Second and final colour. The next coat of paint can be applied with a fairly dry brush or an easier and more effective method is to use pieces of sponge or foam rubber.

Mix a thin solution using half water and half emulsion paint. Ideally this colour should be a darker version of the base coat and much darker than the finished colour required.

Use the water colours or poster paints to tint solution to required shade.

This coat must not be applied too thickly. As a guide, the solution should pour like thin cream.

Apply this solution to the surface evenly. This is called the glazing coat. Use a sponge, foam rubber or piece of cloth and working along the grain wipe away any surplus paint. Work with swift even strokes until the base coat shows through the glazing coat. Keep wiping away the paint until the required effect is achieved. If you rub away too much and the surface becomes too light repeat the glazing coat.

The paint dries fairly quickly so work on small areas at a time, for example do panels, drawer fronts and shelves individually. This will simplify the work and give a professional finish.

If you are working with carved or moulded surfaces let the glazing coat run into the hollows and wipe away the relief sections so that they are highlighted.

Make sure that the same colour rendering is achieved on all the surfaces of the object, some variations are of course desirable but they should not be out of keeping with each other.

General hints

Make sure that you are antiquing a suitable object.

Experiment on pieces of scrap wood by applying the base coat and then rubbing off the glazing coat to see the results.

Practise wiping away the glazing coat so that you get a 'touch' that can be repeated from one surface to another. Always start with a light coloured base coat and darken it for the glazing. Experiment by adding different colours to alter the shades slightly, but do remember what you have done so that when you want to repeat the process on an object you will know exactly which colours to use.

These samples will give you some idea of the colour effects that can be achieved using the colouring techniques described. **1.** *Plain piece of pine before treatment.* **2.** *Base coat of pale blue emulsion paint.* **3.** *Pale blue base coat with deep blue glazing coat.* **4.** *Pale blue base coat with deep green glazing coat.* **5.** *Pale blue base coat with brownish grey glazing coat.* **6.** *Beige base coat with brown glazing coat.* **7.** *Grey base coat with blue glazing coat dabbed on with a piece of cloth.* **8.** *Pale green base coat with deep green glazing coat applied with a sponge.*

The shelf is transformed with paint to blend with surrounding area.

Asymmetric design

In symmetric design the central area is the focal point and the design is equally balanced on both sides (Design know-how chapter 36, page 1008). In asymmetric design, however, the focal point, or the main centre of interest, is shifted to one side.

Do you remember the image of the balance-type weighing machine shown in the chapter on balance? In the same way, imagine a seesaw (fig.1) on which two people of equal weight are balanced. This is a clear example of symmetric balance. Now move the left-hand figure in towards the centre (fig.2). The weight on the seesaw also moves, the design becomes asymmetric but is also physically and visually unbalanced. What can be done to restore the balance? One way is to move the fulcrum of the seesaw (the balancing point) along towards the right. The two figures are still asymmetric but they balance once again (fig.3).

The figures on the seesaw illustrate the principle behind most successful asymmetric design, ie if you move the weight of the design to one side you must also provide a secondary counterbalancing interest. The strongest, most eye-catching part of the design will then act as a pivot for the rest. Fig.4 shows the way in which a simple daisy design moves from a symmetric to an asymmetric position and is still balanced.

Figs. 5-8 show other asymmetrical designs.

Experiment

Fold a piece of white paper 10cm (4") square in half and cut it into 5 or 6 shapes.

A. Arrange the pieces symmetrically any way you like.

B. Draw a square about 20cm (8") square on brown paper and arrange the pieces inside the square in a thoroughly imbalanced and unsatisfactory way (the pieces can overlap if you like).

C. Now arrange the pieces so that the centre of the design is in the centre of the square, in roughly the shape of a flower head. Push the pieces about until they look balanced, but not symmetrical.

D. Put a group of pieces just off centre. Take a couple of other pieces and move them about in the opposite corner of the square until they balance the larger group.

E. Replace a couple of the pieces of white paper with red paper. Now you have to think about balancing the areas of colour as well as the forms.

F. Re-arrange the various shapes on the brown paper to make a series of asymmetric designs based on figs. 5-8. Do not crowd everything to one side. Take the most important feature of the design and re-arrange the other parts until the whole thing balances.

G. Now try creating an asymmetric design from scratch. Choose a design which would be useful for craft work. Asymmetric balance has a liveliness and vitality that is sometimes lacking in symmetric groupings or patterns. It sometimes tends to become almost too lively and unrestrained. If you should feel your design running away with you introduce a little symmetrical balance (arrange some parts of the pattern in a more symmetrical way, for example) and this will give the order you need.
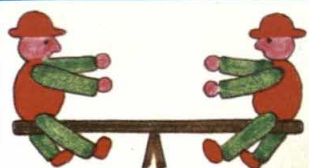
1. *Equal symmetrical weight.*
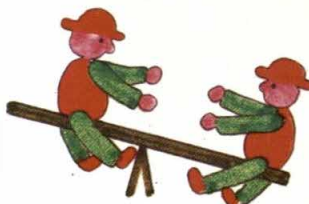
2. *Unbalanced seesaw.*
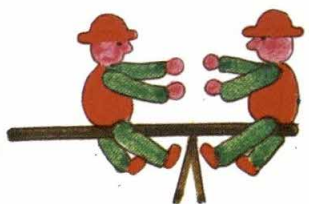
3. *Balance is restored to an asymmetric arrangement.*

4. *Move the weight of the design to retain balance.*

5. *An asymmetric rural scene—still in balance.*

6. *Magazines are often laid out asymmetrically.*
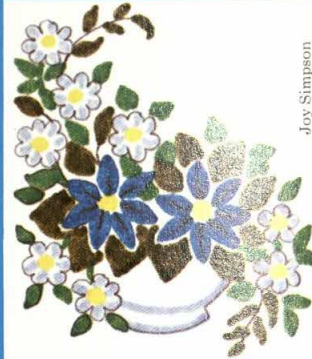
7. *Balanced bowl of flowers.*

Joy Simpson

8. *Asymmetric fashion can be full of movement.*

Creative ideas 37

Pretty Patches

Frayed cuffs, worn edges and tattered elbows are common ills of old knitwear, but they can be remedied with patches and bindings, especially decorative leather ones.

You will need:

Sylko perlé embroidery thread and cotton sewing thread.

Leather or dressmaker's shears.

Transparent sticky tape.

Washable suede or chamois. When working by hand use cotton sewing thread with a glover's needle. For machine stitching wind a bobbin spool with Sylko perlé embroidery thread. Use a ballpoint needle in the machine and cotton sewing thread on top.

Hold patches and bindings in place with sticky tape while sewing.

Elbow patches. Make a paper pattern of the required shape and cut out two suede patches. Work any machine stitching before attaching patch to garment. Use the machine foot as a guide when working parallel rows of stitching. Knot threads on wrong side of patch to finish.

Mark position of patches on both sleeves making sure they are level. Stitch patches in place by oversewing with matching thread.

Patches can also be attached with running stitch which is easy to do if you first punch holes in the patch by stitching round it with the needle on an unthreaded machine.

Pockets with binding. Cut two pockets from chamois to desired size allowing 2.5cm (1") extra on the width for tucks.

For the tucks fold the pocket in half lengthwise and stitch down the fold 3mm (⅛") from the edge to length required. Measure equal distances on either side of centre tuck and make two more tucks.

Cut binding for top edge of

pocket to twice finished width. Fold binding over edge, holding it in place with sticky tape.

Stitch to pocket through all thicknesses. Repeat with other pocket.

Camera Press

Tape pockets to garment and stitch close to edge. Set the machine to a slacker tension and slightly longer stitch. Take care not to stretch the knitting as you sew.

Imaginative use of shapes and decorative details make patches a fashion extra.

Cuffs and front edging. These are worked as simple bindings. Cut strips of chamois the length required to fit sleeves and fronts and twice the finished width. Remember to allow at least 2cm (¾") for seams on the cuff binding.

You may have to piece the strips to get the length for the front edging, so be sure that the nap of the leather runs in the same direction. Stitch seams in cuff binding to form circle. Fold binding over cuff edge and tape to garment.

Stitch close to edge through all thicknesses. Attach front bindings in same way. Cut two strips of chamois for front ties, fold in half and topstitch. Attach to front edges of garment over binding seams.

Smarten up a drab cardigan by trimming it with suede. Tiny pin tucks add interest.

Making simple paper collages

The word collage (derived from the French verb *coller* meaning to glue) is used to describe the abstract art form of juxtaposing and gluing together different materials to create a picture. Of all picture making techniques, collage is probably the most versatile—and therefore of universal appeal to adults and children alike.

It is simple and great fun to do. Gluing requires no particular skill, and it is utterly absorbing to see the various effects that can be achieved by relating materials of differing texture, shape, colour and pattern.

Compositions can be as straight-forward or as intricate as you wish; they can be flat or three-dimensional, and you can use more or less whatever materials you care to choose—from used matchsticks to car tyres—so just let your imagination rip!

Paper collage is, of course, restricted to using paper materials only. This makes it more manageable than some other types of collage, and costs are negligible if you use papers to be found in the home—but don't be misled into thinking this means it is any the less enjoyable or creative.

In fact, paper collage provides a particularly fascinating and challenging exercise—because it is only when you start a serious search that you become aware of just how rich and varied is the choice of papers available. And it's only when you start combining them that you realize the almost infinite variety of effects that can be achieved.

Papers in the home

Just go into the kitchen, see how many different papers you can find there—and you may well come to the conclusion that there's no need to go out and buy special papers for making a collage!

Probably you will find a thick brown carrier bag or, perhaps, a prettily decorated one; absorbent paper towels; semi-transparent grease-proof paper; gleaming cooking foil; labels in decorative shapes and colours on jam jars, cheese boxes, tinned foods and soft drink bottles; lacy paper doilies; cereal cartons and other packets in thin cardboard.

The living room will yield still more. Old picture postcards, perhaps with foreign stamps, thick writing paper and flimsy airmail paper (coloured, ruled or plain), envelopes of various shapes, sizes and colours, brown wrapping paper, perhaps some pretty wrapping papers, corrugated paper, blotting paper, shiny sweet and chocolate wrappers, garden seed packets, bus, train, theatre and old air tickets, an invitation card, cheque book stubs, receipts from check-out tills, old photographs and negatives, leftover pieces of wallpaper, cigarette packets and gold backed cigarette packet lining paper, paper napkins, and, of course, magazines and newspapers.

Using colour, texture and shape

As you can see, the choice of papers is huge. And it is quite extraordinary how many and varied are the effects that can be achieved depending on the way papers are combined.

Experiment with a square each of white card, scarlet tissue and kitchen silver foil. See how many different correlations of texture, colour and pattern can be made with only these three papers.

For instance, a geometric pattern with the squares laid side by side and just overlapping will show each colour alone, their interaction and changes where they overlap.

Accentuate the different textures by sprinkling the tissue with a little water and rubbing it with a cloth so that it has a delicate streaked sunset look, and fringe the foil like a gleaming flowing mane or waving grasses.

Use the papers for three-dimensional movement, rolling the card like a log and wrapping it with superimposed layers of foil and tissue cut into flame shapes. Or cup the tissue into giant poppy shapes and scratch the foil to make veined leaves. The permutations are almost endless.

Right: decorative selection of framed collages, all similar in style to the blue collage illustrated overleaf.

Left: choosing and cutting out suitable material from magazines is something to be enjoyed by all the family. It's a good idea to sort and classify items as you come across them.

Collecting special papers

It is fun to collect papers with a particular project in mind. For instance, you might search out and put to one side papers of the same colour tone, seeing just how many different textures and patterns there are. You might choose a subject and search out as many different visual interpretations of it as you can find. Or, on holiday, you might collect postcards, a menu, your tickets, the label from a local wine, a theatre programme and a local newspaper to form the basis of a nostalgic holiday memento collage.

But there is no need to collect vast quantities of different papers before embarking on a project of this sort. Most collages are simply creations of the moment and should be enjoyed as such. The Christmas tree collage illustrated here is made entirely from sweet papers—and serves as an excellent example to prove that a little imagination can turn the simplest of materials into a delightful and very effective collage.

To make a paper collage

You will need:

Stiff cardboard, hardboard or plywood of required finished size for mounting the collage.

Papers.

Scissors and, possibly, a Stanley knife.

A rubber based adhesive, such as Cow Gum.

A clear general purpose glue such as UHU or Bostik 1.

Hardboard or plywood off-cuts can often be bought cheaply from do-it-yourself shops.

Use rubber based adhesive for papers which are to be stuck flat, and the stronger, clear, general purpose glue for three-dimensional effects when only part of a piece of paper is to be glued on to the mount. Always spread glue in a thin even coat as this adheres more effectively and is less likely to mark papers than large blobs of glue. Tissue papers and magazine pages can be lightly ironed to make them crisp. Cellophane can also be ironed very gently if it is first placed between two sheets of paper—but cellophane is best abandoned if very badly crumpled as this light ironing will have little effect. It is a good idea to start by laying a few pieces of paper on the table to form the basis of your composition. Make a quick sketch on rough paper and use this as a guide for gluing into position. As you get more skilled, and your feeling for contrasting and complementary textures, colours and designs develops, you will probably find it unnecessary to make this preliminary testing and can rely on your creative judgment to build and glue your collage immediately.

Opposite, top left: amusing collage takes the apple as its subject and shows the fruit in many guises. Large apple shapes cut from a coloured magazine, shiny red paper, cellophane and orange tissue are surrounded by smaller apples—one cut from a seed packet illustration of a lettuce, one is a tomato (the original 'love apple'), a third looks like a globe, another rises like the sun, and there is even a humorous apple pie! The whole is mounted on yellow tissue damped and streaked with red tissue to make it a ripe dessert apple colour.

Opposite, top right: 'Birthday breakfast in London', a holiday memento collage by Liz Cooksey (who also made the kite and apple collages shown here). Depth is given by raising the circular shape cut from a cereal packet on to an old adhesive tape cardboard ring. Repeated circular shapes in yellow card and a magazine cut-out of eggs tie in well, and again echo the round shape of the gleaming milk bottle top which acts as a central focal point. The use of blue holds the composition together nicely and pleated airmail letters add a surprise element of interest.

Opposite, bottom left: simple but very effective Christmas tree collage made from sweet papers. By Stephen Marriott, a day release student at the College for the Distributive Trades.

Opposite, bottom right: kite collage uses warm colours and a strong sense of textures. Main kite is sandpaper mounted on corrugated cardboard. Other 'shadow' kite is outlined with shreds of orange blotting paper. Bows made from coloured negatives superimposed on gold cigarette paper give luminosity and curled paper-string kite tails add extra dimension.

Left: collage in blue uses numerous curved shapes and centres on a single cut-out figure. Interest is added by optical illusions of texture—even the 'embroidery' is, in fact, cut from a magazine illustration.

Unusual effects with glazes

Once you have experimented with a range of 'straight' basic glazes, and have become familiar with the particular effects produced by simple glazing techniques, you may want to try some more unusual ideas.

Glass glazing

One way to produce an interesting effect is with pieces of broken coloured glass.

The plate shown here has a central application of blue glass which has pooled to give a rich, deep colour to the centre of the dish. The surrounding area is painted with a mixture of manganese dioxide and copper oxide to give a gold effect. This combination of glass and metal gives the dish a spectacular lustrous quality.

The glass melts in the heat of the kiln, runs and re-hardens on cooling to give a fascinating jewel-like finish. Any kind of glass can be used, from wine or beer and medicine bottles to discarded pieces of stained glass window if you are lucky enough to live near a craftsman who works with this technique. Blue and green glass are particularly effective.

If you want bright colours, make sure that the glass you use is coloured all the way through. Some glass is flashed with a surface colour only, and this type will appear colourless when melted down.

Remember that because the glass melts and runs across the surface of the article, flat and vertical surfaces are not suitable. Choose a dish, or a piece that has a suitable slight recess in the surface.

Lustrous cloud effects surround a jewel-like blue pool on this large dish designed by Val Barry. The central glass-glazing combines with metal oxides to create a rich and exciting finish.

Dick Miller

'Glass glazing' small items

Rings, brooches and small pendants are ideal pieces to decorate in this way. The jewel-like effect that the glass gives is especially suitable for such decorative items.

Jeweller's findings can be glued on once the piece has been fired, but make sure once again that the surface is slightly hollow so that the glass does not run off all over the kiln.

You will need:

Prepared clay.

Coloured glass.

Pastry cutter or similar circular instrument.

☐ Use a circular tool of the right size to cut two or three small circles of clay 9mm (⅜") thick (fig.1).

☐ Roll out a thin coil of clay and press it down around the edges of the circle. This forms a hollow into which the glass can be placed.

☐ The glass must be thoroughly broken up, so wrap it in newspaper and hammer it until the pieces are fine and small. If the glass pieces are too large and thick, the pressure may cause the clay to crack.

☐ Sprinkle a thin film—about 3mm (⅛") thick—evenly all over the surface you intend to colour (fig.2). It should cover the surface completely.

☐ For a simple effect, fire the clay without further decoration.

The glass forms a pool of colour surrounded by the neutral tone of the biscuit fired clay.

Mixing colours. You can, if you wish, use glass of different colours. This is easier to do on a larger piece because the glass must be placed carefully or the colours will run into each other. Choose colours which compliment one another like reds and browns, or blues and greens.

Melvin Grey

Glass-glazed ring and pendant with tiles decorated in gold and silver lustre. Designed by Val Barry.

Combining glass with other materials

Glaze. The area that you intend to cover with melted glass need not be glazed. You may, however, want to glaze the rest of the piece.

☐ Biscuit fire it before adding glass in the usual way. Then simply brush the parts that are to be glass-covered with wax (for the use of glaze-resist waxes, see Clay chapter 19, page 842).

☐ Then glaze the rest of the piece and cover the waxed area with the crushed glass. The wax simply burns away in the firing.

Oxides. You can achieve bright, rather metallic colours by painting on oxides and covering them with clear glass.

☐ Paint the surface of the pot with a thin coat or a pattern of oxide, then apply the glass over the top of this as before.

☐ Copper oxide gives a turquoise colour—experiment with other oxides to see what colours they will produce.

More glaze and colour techniques

As you do more experiments with glaze and other forms of applied colour, you will discover that the range of possibilities is unlimited.

The suggestions given here may provide a starting-off point, but do not feel limited by them, or inhibited from

1. *Glass glazing a brooch: cutting the circle of clay.*

Nelson Hargreaves

2. *Sprinkling a film of glass into hollow on clay surface.*

Relief slip decoration with underglaze colours gives a two-dimensional quality to this delicate flower pattern. Designed by Moorcroft Pottery.

making some experiments of your own. Without a great deal of experience you can never be certain that you will achieve a particular effect, but one of the encouraging facts about glazing and allied techniques is that nothing is really 'wrong'. The finished effect may be unexpected, but it is almost always attractive or interesting in some way. These experiments should, however, be restricted to ornamental pieces, and not used on pots likely to come into contact with food or drink.

Underglaze colours. Underglaze colours are designed to be painted on to the surface of the pot before the glaze is applied, and when the pot is leather hard or after biscuit firing.

The colours—unlike oxides—are stable, and will reproduce the colour stated by the supplier. A wide variety of shades is available, ranging from yellows, pale turquoise, pastel greens to royal blue, crimson and purples.

☐ The paints (which may also be supplied in powder form) should be thinned with a little water first, then painted on to the pot. A transparent or light matt glaze should then be used to let the colours break through.

The plate illustrated here is painted with royal blue, pink, lavender and yellow in the shape of leaves and flowers. It is also lightly carved to give a subtle, two dimensional quality.

Body stains. Body stains have been introduced in a preceding chapter (Clay chapter 16, page 704). They can be used to colour slip, which can then be trailed or painted on to the surface of the clay.

☐ The amounts that should be used vary with each colour, so follow the manufacturer's instructions.

☐ If coloured slip is applied all over the pot, it can be carved through once it is dry to form a relief pattern (fig.3).

☐ Alternatively, areas can be carved

out and filled in again with a different colour (fig.4).

☐ If the slip is being brushed on, it is possible to achieve a more delicate relief effect. Use several colours to form flowers, landscapes, or a more abstract pattern (fig.5).

☐ All these decorations should be applied when the clay is leather hard.

Glaze stains. These are intended to colour glazes. Once again, the amount to be added varies with each colour, so follow the instructions supplied.

☐ Glaze coloured in this way can be applied by any of the methods described in Clay chapter 19, page 842.

Colour applied after glazing

Colour can also be applied to the pot after it has been glaze fired. There are two types of colour that can be used in this way.

Onglaze colours. These are supplied in powder form, and should be mixed with liquid before brushing on to the glazed pot. They give a bright, enamelled look.

3. Carving through the dried slip.

4. Painting in different coloured slip.

Nelson Hargreaves

5. Using other colours to fill out the design.

Peter Heinz

Small hexagonal box with onglaze decoration designed by John Maltby.

The small box in the picture has bright spots of colour applied in this way on top of the bronze metallic glaze. The pot is then fired for a third time, this time to a temperature of 750°C (1380°F) to fuse the colour to the glaze.

Liquid metals or lustres. These give a metallic effect—gold, silver or copper, or blue, green or mother-of-pearl lustre. They are supplied in liquid form, ready for use.

☐ Apply a thin coat of lustre and allow it to dry before firing the pot.

☐ These colours should be fired between 700° and 750°C (1290°-1380°F) —follow the supplier's instructions.

☐ Some of the liquid metals look dull when they are removed from the kiln. They should be buffed to give a shiny, polished surface and special burnishing sand or spun glass burnishes can be bought for this purpose.

Using overglaze colours

Enamels, overglazes and lustres can be applied to ordinary white ceramic tiles with maximum decorative impact.

☐ Buy the thickest quality tiles from a hardware shop to lessen the risk of warping when they are fired again.

☐ Decorate them with geometric or natural shapes in bright colours, and use them as heatproof stands.

A later chapter deals with making and decorating tiles in greater detail.

Panel of red clay tiles each 5cm (2″) square, designed by Alan Caiger-Smith; decorated with tin-opacified glaze then painted in various lustre mixtures containing silver and some also with copper. They are three times fired: biscuit, glost and lustre firing.

Stephen Moreton-Prichard for Ferro Ltd.

Figurative designing

When you plan a design for a macramé wall hanging, a good starting point is to choose a subject which has a definite feature or shape which can be reproduced by a macramé technique. This can be achieved by the introduction of something like rings or beads which can be worked into the knotting. A clever example of this is shown in the owl with its very distinctive features—the eyes, wings and claws that can form the basis for the whole hanging.

Owl hanging

Overall measurement: 40cm x 23cm (16"x9").

You will need:
Medium-weight string, 1 ball each of orange and black.

Two wooden rings, 10cm (4") diameter.
Dowel, 12mm (½") diameter, 20cm (8") long.
Oval wooden beads, two 3cm (1¼") long and two 5cm (2") long.
Thin hollow cane, 30 lengths, 4cm (1½") long.
Macramé board.
Pins, clear adhesive.

Cutting the strands. From the orange string, cut 1 strand 30cm (12") long, 12 strands 90cm (36") long, 4 strands 200cm (80") long, 1 strand each 20cm (8") long and 100cm (39") long.
From the black string, cut 12 lengths 180cm (60") long, 4 strands 50cm (20") long and 1 strand 20cm (8") long.

Working the hanging. Mount the 30cm (12") orange strand on to one of the wooden rings (A), thread on a 3cm (1¼") bead and double cord the strand on to the opposite side of the same ring. Double cord it on to the second ring so that the rings just touch, thread on the second 3cm (1¼") bead and double cord on to the opposite side of the second ring.

☐ Mount three of the 90cm (36") strands on to each ring as shown in the diagram (B), pass strands behind the beads and double cord on to the opposite edge of the rings.

☐ Using the 20cm (8") orange strand as knot bearer, double cord the strands from the rings on to it (C). Mount the eight 200cm (80") orange strands on to the knot bearer between the strands from the rings as shown (D). Continue working as shown in the diagram, finishing the lengths by double cording on to the dowel.

☐ Mount six 180cm (60") black strands on to the lower edge of both wooden rings (E). Continue working as shown in the diagram, using the 100cm (39") orange strand, mounted between the rings, as a knot bearer for first row of double cording (F). Use the 20cm (8") black strand for the second row of double cording (G). Mount the remaining orange strands in the middle and use the centre pair as knot bearers for the remaining rows of cording (H).

☐ Mount the remaining black strands on to the side for the cane 'claws' (J). Complete the hanging as shown in the diagram. Neaten the ends by sticking down on to the back of the hanging.

Alternating flat knots (fig.1). These can be worked when strands are mounted in multiples of four. Work a flat knot (see Macramé, chapter 1, page 176) on each group. In the next row leave two strands at the edge and with the next four strands (ie the second pair of the first group and the first pair of the second group) work a flat knot. Work another flat knot with the next four strands and so on until the end of the row when two strands will remain. Work the third row as the first and the fourth as the second.
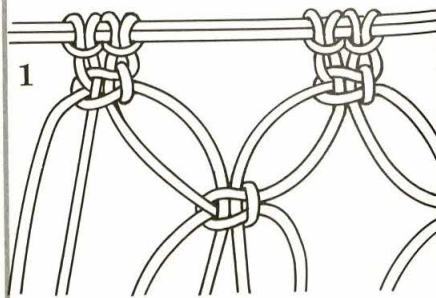
The distinctive features of the owl form the basis for this hanging.

C

D

F

A

E

E

B

B

B

B

J

J

G

H

	overhand knots
	cording
	alternating flat knots
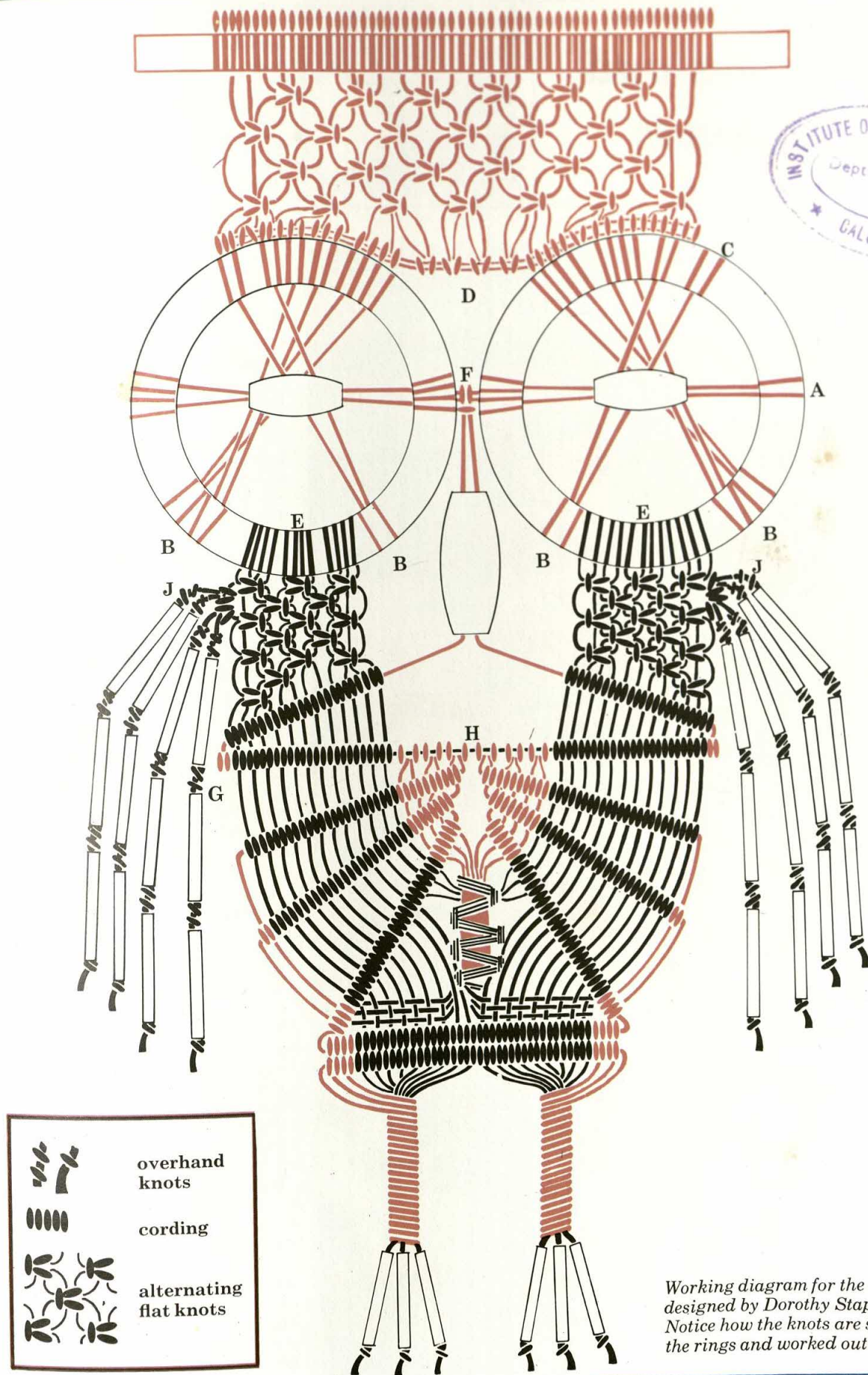
Working diagram for the owl hanging,
designed by Dorothy Stapleton.
Notice how the knots are started from
the rings and worked outwards.

Shelley Churchman

1047

Triangles and diamonds

The triangle and the diamond, whether used alone, together or combined with other shapes, are almost as popular for patchwork as the hexagon. Triangles in particular are to be found in many early patchwork designs because they were easy to cut from a square (manufactured templates were not available). So try experimenting with these shapes and see what you can produce.

You will find there are numerous ways of joining them to form exciting geometric designs. If you do not want to make a large expanse of patchwork, consider them for filling in or for making a straight border.

If you have plenty of scraps of plain fabric, triangles and diamonds are good shapes to use as the dramatic, geometric shapes formed lend themselves to the use of plain fabrics.

Triangles and diamonds are slightly more difficult to handle than hexagons because the sharp points are more tricky to cope with. But with practice this becomes easier.

Triangles and diamonds are much used in traditional American patchwork (piecing). The technique used for piecing, which is rather different from that described here, is covered in a later chapter.

Using triangles and diamonds

Templates and papers. Both solid and window templates for both types of diamond and equilateral pyramid triangle can be purchased. If you buy just the solid shape make a window template in the way described for hexagons (Patchwork, chapter 3, page 208). 'Papers' are best cut from thin card as this is stronger and will be a more accurate guide than paper when folding fabric over the points.

Making the patchwork. It is a good idea to cut fabric patches using the window template as you can see what the finished patch will look like.

Cut triangular patches with one edge on the straight of grain. When cutting diamonds make sure that either two sides are on the straight of grain, or that the axes are on the straight of grain.

Note: with some designs it is not possible to join the patches with the straight of grain matching, eg box and star patterns.

Make each patch by pinning the paper to the wrong side of the fabric patch. Fold over the turnings and trim, if necessary, as shown and tack (fig.1).

This beautiful tablecloth has been created from long triangles made by halving a square diagonally. The predominant colours are white, plus shades of blue and green. These colours are echoed in the deep border of the cloth.
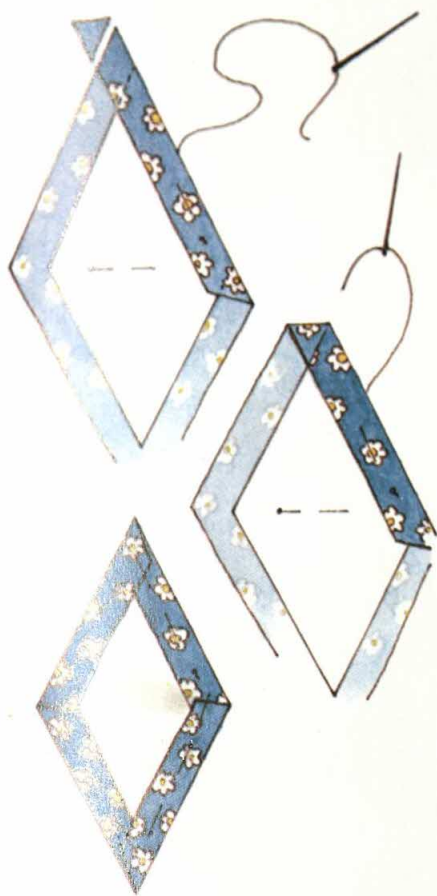
1. *Folding, trimming and tacking the corners on a diamond shape. Treat triangles in a similar way.*

Remove the pin and join as for hand or machine sewn hexagons (Patchwork chapter 3, page 208).

When joining diamond shaped patches to make a star it is a good idea to work the seams in towards the central point.

The triangle

There are two basic kinds of triangle used in patchwork, the 'pyramid' and the 'long triangle'.

The pyramid

This triangle (fig.2) has a short base line and the two other sides equal (these can be the same length or longer than the base line). This shape can be made by halving a diamond widthwise.

'Streak of lightning' and 'Dog's tooth' (figs. 3 and 4) are designs made from this shape. These designs can be made up into large areas of patchwork or into strips and used as borders.

The long triangle

This triangle has its base line longer than the two equal sides. This shape can be made by halving a diamond lengthways or by dividing a square diagonally (fig.5).

'Cotton reels' and 'Whirlwind' (figs. 6 and 7) are two designs which can be made from this shape.
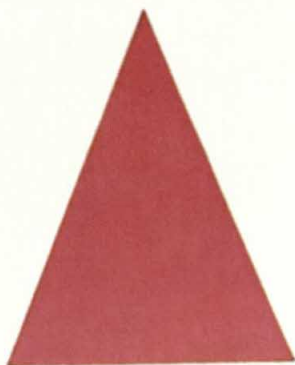
2. *A pyramid triangle made by halving a diamond width-wise.*

3. *'Streak of lightning' is made from pyramid triangles.*
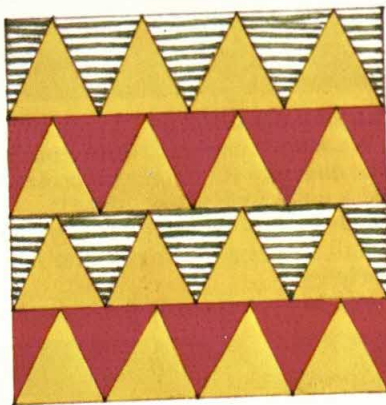
4. *Pyramid triangles used to make the 'Dog's tooth' design.*
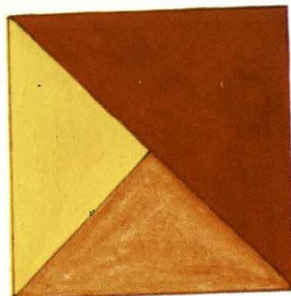
Gwen Simpson

5. *Long triangles can be made by halving or quartering squares.*
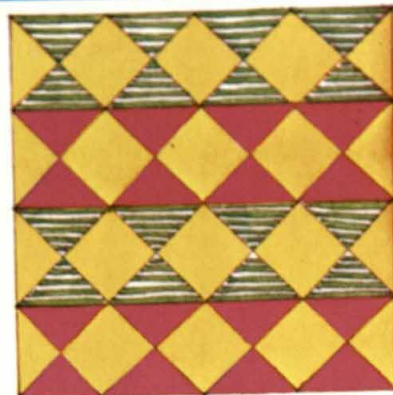
6. *'Cotton reels' is an old design made with long triangles.*
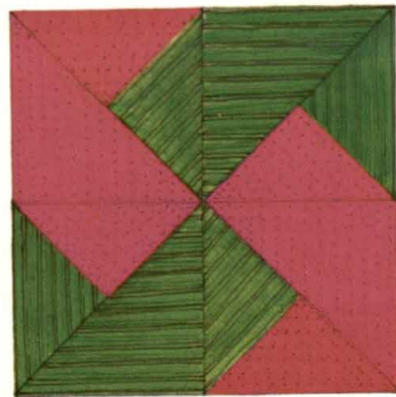
7. *Half- and quarter-square triangles make the 'Whirlwind'.*

Camera Press

Dozens of triangular pennants combine to make one large flag.

'Baskets'. An effective way of using the long triangle in traditional patchwork is to make the triangles into separate basket shapes and then to appliqué them to a plain background, adding a matching base and handle to each one (fig.8).

The diamond

Again there are two basic variations of the diamond shape, the 'lozenge' and the 'long' diamond.

The lozenge

This shape can be made from a hexagon (right) and is made up of two equilateral triangles.

The box (or 'baby blocks') is another old and striking favourite.

It can be made from three different fabrics by sewing the diamonds in groups of three, taking one fabric as the 'lid' and the other two for the 'sides'. The three-dimensional effect will become obvious as you work.

Although ideal for a cot quilt, this pattern can become a bit tiring on the eyes if used over a large area so it is sometimes used as a border.

The 'six-point star' is also made from the lozenge shape (fig.10).

### The long diamond

It is a simple matter to draw your own long diamond shape using a protractor and a pair of compasses (fig.11).

Decide on the length of the sides (they are all the same); draw a line A-B to this length.

Place the protractor at B and mark 45°

Baby blocks quilted with running stitches makes a child's charming quilt.

'Basket of scraps' is the design chosen for these two cushions. The shapes used are mainly long diamonds and squares. The attractive design is by Laura Warner.

with a dot, C. Draw a line through this dot to B.

Set the compasses to the length of A-B and keep this setting throughout.

With the point of the compasses on B, mark the length on B-C at E.

With the point at E and then at A mark the arcs to cross at F.

Join E-F and A-F.

Finally check the accuracy of your work by making sure that the angles FEB and FAB are 135° and that AFE and ABE are 45°.

The figure AEB is one of eight identical triangles which when fitted together form an octagon.

The 'eight-point star' design is made from long diamonds (fig.12).

The 'Star of Bethlehem' is another design made from this shape. It has been a favourite with American women for generations and on some quilts the star is so enormous that it covers the whole quilt.

Basic know-how

Quilting patchwork. There are two reasons for working quilting on a patchwork or appliquéd fabric: firstly, to add warmth and, secondly, to throw the design into relief. One of the traditional methods is to outline the patchwork patterns with small running stitches worked in two movements. It is quite feasible to work small pieces in the hand working from the centre outwards.

Large quilts are best worked in a frame. A rectangular embroidery frame (slate frame) is suitable. Move the frame across the work as you complete each section.

It is always essential to tack the three layers of patchwork fabric, wadding and lining together (Patchwork 2, page 180) before quilting.
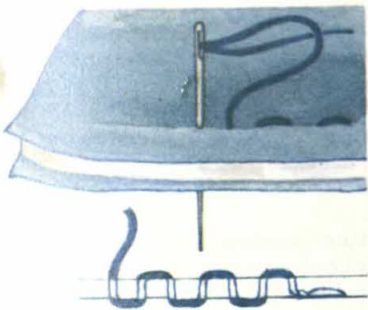
Barbara Firth

Patchwork cushion with Star of Bethlehem design made up of long diamonds.

Camera Press

8

9

10

11

12
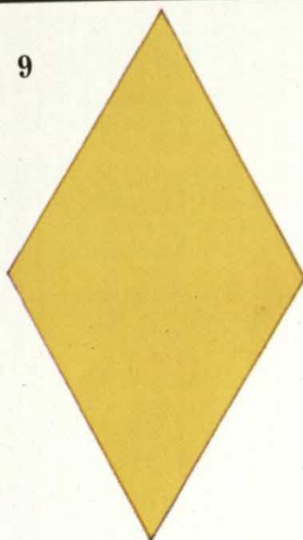
8. *Make a basket from long triangles and then appliqué it to a plain background, adding a base and handle.* 9. *A lozenge diamond.* 10. *Six lozenges make a six-point star.* 11. *How to draw your own long diamond.* 12. *The long diamond shape is used to make up the eight-point star.*

Gwen Simpson

1051

Screen stencils and surfaces

Although the paper stencil discussed in Printing chapter 13 is one of the simplest forms of stencil it will not stand up to repeated printing. Since this is really the purpose of screen printing you will need paper f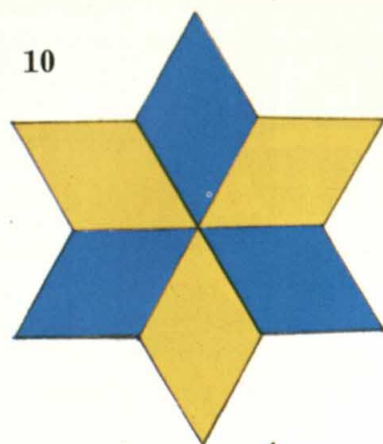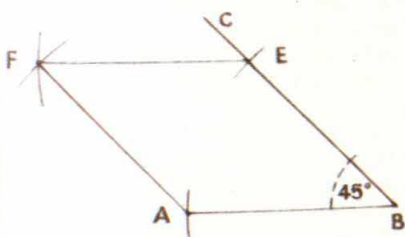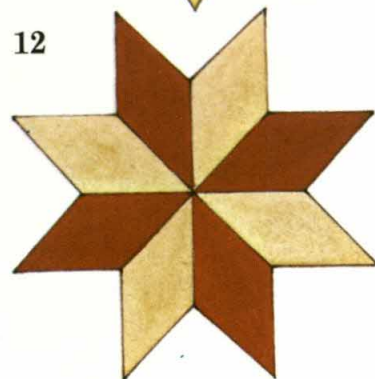or paper stencils which enables you to print considerably more than just a motif on a dress or a few napkins. Special coated papers are available for this purpose but they require special cutting and application techniques.

Profilm

Coated papers designed for use as screen printing stencils are known collectively as profilm but there are variations within this category. Profilm gives a sharp, crisp image, sticks to the mesh and allows for repeated printing without wear and tear. It is especially recommended for lettering and for other motifs which lend themselves to cut-out stencils. However, profilm is not waterproof and must be specially treated for use with fabric dyes and water-based printing inks.

Profilm consists of sheets of semi-transparent paper coated with a film. It is, in effect, two sheets of paper stuck together, a backing paper and a glossy film.

Cutting profilm stencils. Profilm is cut out, like ordinary paper stencils, with a scalpel or a craft knife. The difference with profilm is that you do not cut all the way through the paper but only through the film. This takes a little practice but it has the great advantage of holding the entire design together and, instead of having to accumulate miscellaneous bits and line them up again on the screen, profilm stencils can be stuck on in one piece.

To transfer a design on to profilm is easy since profilm is semi-transparent and the design can be seen through the film.

Always use a piece about 5cm (2") larger than your design and pin or tape this over the design, glossy film uppermost. Proceed to cut, using your design beneath as a guide and taking care not to press too hard so you don't cut through the backing paper.

When you have cut completely round a section, lift the section up with the edge of your blade and peel it off the backing paper as shown. This is the part which will eventually print. (Remember that stencils are negative images and the parts which make up the finished stencil are those that do *not* print.)

Optical art picture has the quality of a painting by an established hard edge painter but it has, in fact, been screen printed in three sections. The design is by Janet Allen.

Dick Miller

Profilm stencils are made by cutting away top layer of transparent film.

Attaching profilm to screen. Lay a blanket covered over by a piece of thin cloth or a sheet on your work table. Lay the cut out stencil on this, glossy side up. Now position the screen over the profilm as you would with an ordinary paper stencil, making sure the design is correctly centred. Put a thin sheet of typing or tracing paper over the mesh inside the screen, then carefully iron the screen through the paper to attach the profilm to the mesh beneath. Do not use a steam iron.

Set your iron at a low temperature. The makers of your particular film will advise on the correct setting. Keep the iron moving and don't press too hard. The coating on the profilm will melt and adhere to the screen mesh. Continue ironing until the design can be seen clearly through the covering paper and the stencil has turned darker evenly all over. Then allow the profilm to cool.

Turn the screen over and peel off the backing paper.

Stick gumstrip to the outside and inner edges of the screen frame as described in Printing chapter 13, page 962 to prevent ink from seeping out.

Your screen is now ready for printing with oil-based ink, but profilm is not waterproof so if fabric dye or a water-based ink is to be used the screen must first be varnished to protect the profilm. This is somewhat time consuming but is worth it if you are planning to do repeated printing on several lengths of cloth.

To waterproof profilm you will need some polyurethane varnish, white spirit and several soft rags.

Paint the inside of the screen with polyurethane varnish, covering profilm, open mesh and gumstrip. Then, with one of your rags soaked in white spirit, rub the outside of the screen

1. *Half of pattern for op art picture. Enlarge to desired size and complete the pattern by tracing enlargement, then turning it upside down beside the enlargement to make the full width of the design.*

mesh. This is very quick and easy to do and clears the varnish from the open parts of the screen, eg those sections that will print.

Be sure you have removed all traces of varnish from the open spaces. Look at the mesh against the light to check this.

Allow the polyurethane varnish covering the profilm to dry completely. Then repeat the process, this time painting with shellac on the outside of the screen and rubbing the inside in the same manner as before with a cloth soaked in methylated spirit which is the solvent for shellac just as white spirit is for polyurethane. The methylated spirit will not shift the polyurethane.

After the outer side has been treated let the screen dry. It is then ready for use with any printing colour that is water based since one side of the stencil is protected by polyurethane varnish and the other side is protected by shellac.

Exceptions. There are variations of the iron-on profilm. A few require that a special fluid be applied to make the stencil adhere to the screen. Other types use water which partially dissolves the stencil as it adheres. Clearly one must follow the manufacturer's instructions.

Op art picture. The picture shown looks like a hard edge painting by a professional artist. It is in fact made by printing a simple line and circle design (fig.1). The abrupt change of colours gives the picture its optical illusion.

The design could be used equally well to print a striking, contemporary fabric for a caftan or canvas chair but different colours would need to be used because of the nature of fabric dyes (see below). It could also be made into wallpaper and used to cover one wall in a room or to make a dramatic effect in a small room such as a bathroom or walk-in cupboard.

In the picture shown the red parts of the pattern were cut out of profilm and printed over a solid blue which was squeegeed on to the entire surface of the white paper through the open mesh of the screen. This shows the very opaque nature of screen printing ink colours. (Blue paper could be used instead.)

To print on fabric you must either choose colours that overprint to produce a third colour—eg printing a blue on to yellow which will result in a yellow and green stripe—or print on white or on another colour which will combine attractively with the colour overprinted.
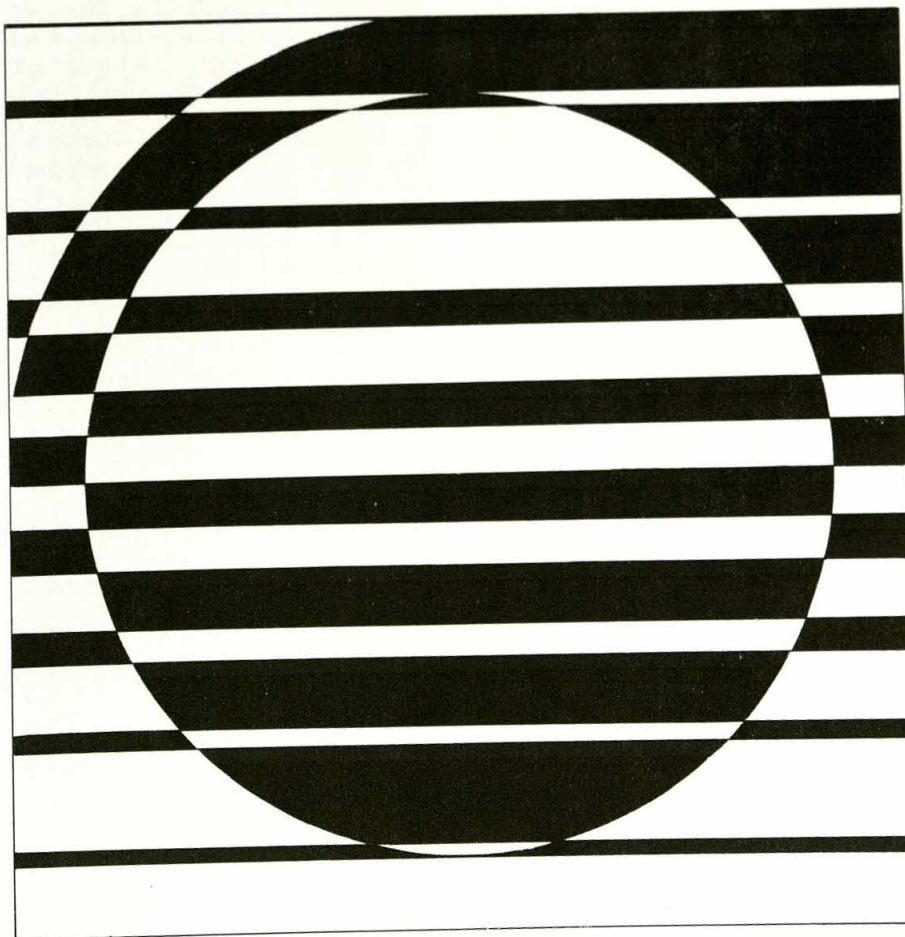
Trevor Lawrence

1053

Laurel and Hardy can be enlarged and screen printed on to various surfaces.

Grease resist stencils

Many people find making a design for screen printing somewhat confusing at first. This is because it is necessary to think about stencils in a negative way—the outline of the image rather than the image itself must be transferred on to the screen. For this reason a method in which the image is transferred directly on to the screen has great appeal. Such a method is grease resist and it has the added advantage of producing texture or shading, as the Laurel and Hardy illustration shows.

Grease resist involves drawing a design on to the screen mesh with either an ordinary wax crayon or a special kind of lithographic ink called tusche. The screen is then coated with glue which the greased areas resist. In this way a stencil is made.

Grease resist is better for bold designs with little or no fine detail since neither crayon nor ink is suited to making delicate lines. Furthermore, since the glue is not waterproof the method is only suited to oil-based printing inks and should not be used with water-based inks or fabric dyes unless the screen is varnished by the method described earlier for profilm.

To make a grease resist stencil
You will need:

Wax crayon, or tusche and an artists' brush with which to paint it on.
Water soluble glue that does not dry waterproof.
Black poster paint (or another colour).
White spirit and rag.
Clean printing screen and squeegee.
Gumstrip tape for edges.

Before you begin make sure your screen is free of grease and is perfectly clean. To transfer the image on to the screen place it beneath the mesh and, using the crayon or tusche, draw it on the mesh, filling in the entire area of the image. Images can be drawn freehand on to the screen as well and for this reason the technique lends itself to spontaneous design.

Wax crayon must be applied thickly and with pressure so that it completely blocks the surface of the mesh. If, however, a textured area is required it can be made by deliberately crayoning in an uneven way or by putting a textured surface such as corrugated cardboard or rough wood under the mesh and rubbing over the mesh with the crayon. The colour of the crayon does not matter.

Tusche must normally be painted on with a brush but a tusche pencil also exists for somewhat finer work. Both are available from screen printing suppliers but the pencil is sometimes harder to find. Some textural effects are possible with tusche by applying the ink scantily to the areas you wish to shade. This way the mesh is not completely blocked.

Masking the background. Once the design is drawn on to the screen mesh, the areas which are not to be printed must be masked just as they are in ordinary stencils. But first be sure to gumstrip the edges of your screen as described in Printing chapter 13, page 962.

To mask the background mix water soluble glue with a little poster paint.

The purpose of the poster paint is simply to tint the glue so you can see what you are doing. You will need to mix enough glue to coat the entire surface of your screen.

Turn the screen over and squeegee the glue on to the back of the screen. Use a plastic ruler as a squeegee since a rubber edged squeegee is not firm enough. The ruler can be washed with soapy water afterwards. Spread the glue as evenly as possible over the entire surface of the screen but don't make too thick a coating. It is better to apply two coats than one very heavy one. The grease prevents the glue from sticking to the screen in these areas but where the grease resist has been unevenly applied for the sake of making texture, the glue will find its way into the crevices.

Let the glue dry, then check for unwanted pinholes by holding the screen to the light. Paint them in or apply a second coat and let this dry.

Completing the stencil. At this point those areas which are not a part of the design are blocked by glue but the image is blocked by grease and this must be removed. With white spirit and a rag wash the surface of the mesh on both sides. The white spirit will dissolve the crayon or tusche but it will leave the glue intact. The areas which

are the design will be opened and ready for printing and your stencil is complete.

To clean the screen after printing use detergent and water to remove the glue and use white spirit to remove the traces of printing ink.

Screen printing on different surfaces

Paper and fabric are by no means the only surfaces which may be screen printed. Almost any surface that can be laid flat so it can be squeegeed is suitable. Special inks exist for a wide number of materials. Always check with your supplier to be certain that you have the right one for the surface you are printing. Otherwise it may not adhere properly and may chip or peel off. Sometimes a special solvent must be used with these inks.

When printing on wood, glass, plastic or metal you can use whatever type of stencil you personally prefer or which is most likely to capture the qualities of your design.

Printing on glass. Various vinyl, cellulose and catalyst inks are available for printing on glass. Mirrors, table tops and windows (if removed and laid flat) can all be decorated. Some inks are transparent and could give an effect similar to stained glass.

Printing on plastic. Polystyrene and PVC may be screen printed as well as Perspex and ordinary household items such as plastic trays. You could print vinyl plastic for a raincoat, shower curtain or a cushion but it is always wise to specify the use you intend to make of the item when you buy inks from the supplier.

Ceramics. Tiles can be screen printed with special screen enamels and then glazed, while special transfer papers are available for pots and other curved pottery surfaces which cannot be squeegeed direct. The manufacturers give instructions for their particular transfer papers but in principle the process is as follows: the design is screen printed with special enamel on to the transfer paper. When the print is dry the entire design is over printed with a coat of clear film which comes with the enamel. This is squeegeed on through the open mesh of the screen and allowed to dry.

The transfer is then soaked in water and slid off the backing sheet on to the pot. The pot is then fired to fuse the enamel on to the surface.

Wood and metal are two other surfaces which lend themselves to screen printing but again the proper inks must be used.

Remember that once the screen is made up with a durable stencil you can use the same design to print different surfaces and this way unusual items can be matched such as kitchen curtains with cutting boards or a glass table top with a table cloth—whatever your imagination suggests.

Colourful PVC encased blocks by Chris Treweek have screen printed designs.

Modelling and tooling pewter

Pewter is a grey alloy of lead and tin. It is very soft and lends itself to tooling or modelling. The pewter used for modelling is softer than copper (Metal chapter 13, page 920) and therefore more detail can be added. The techniques for copper and pewter tooling are very similar. More tools are required for pewter as it is possible to do much finer work than on copper.

Pewter can be used for wall panels or

pictures, covering boxes, jewelry and frames around mirrors etc. You can set stones or beads in it to add colour.

Tools and materials

All the tools and materials are normally available from craft stores.

The pewter is bought in sheet form in varying sizes. Buy .13mm (gauge No. 35) pewter—it is often referred to as .0056″ or .006″.

A metal tracer—for drawing the design on the pewter. You can improvise with a metal knitting needle.

Modelling tools—a small and a large one, are used for the actual modelling.

Ball tools—available in metal or a very strong glass. Useful for making spherical shapes.

Wooden or bone tool—for keeping the pewter flat without damaging the facing surface—a bone knitting needle will do.

A pair of curved nail scissors is used to cut the metal.

A soft duster or piece of thick felt on which to do the modelling—fold the duster so that you have two layers of it on which to press.

Pewter patina—to oxidize the metal, ie make it black to give it an antique appearance. Some of the patina may be removed to highlight part of a design.

Methylated spirit—to clean the metal surface before applying the patina as it will not take if the metal is greasy. Ordinary household scouring powder will do the same thing.

All-purpose adhesive—to glue the pewter to a base or backing board.

A filler—to fill the tooled or modelled parts of a design (Metal chapter 13, page 920).

The design on tracing paper is held in position with adhesive tape.

Mounting. The pewter is always mounted on to a base of some sort. For a wall panel or picture use .6mm (¼″) plywood and for jewelry you can buy metal blanks from craft stores. If you are covering an existing surface, such as a cigar box, the pewter is mounted straight on to this surface.

Metal polish—to shine and highlight the pewter. To prevent discolouring you can coat it with clear varnish.

The tools are not expensive and each has a modelling tip at either end of a different size. Smaller modelling tools are used for fine work and the larger ones for pushing out larger areas. Use each tool in turn and draw lines on a small test piece of pewter to see

Various items covered with modelled pewter. The paper weight is made from clear-cast embedding resin with a pewter base. Note the different ways of finishing backgrounds—parallel lines, spotted for a 'beaten' effect, or left plain. Designer Barbara Maynard.

Tracing tool.

Small modelling tool.

Medium modelling tool.

Large modelling tool.

Small ball tool.

Large ball tool.

Wooden tool.

Alasdair Ogilvie

exactly what each one does. Use the tools on a folded duster to push out the pewter to find out how much you can push out before the pewter tears. Always use the same pressure and repeat the backwards-and-forwards motion to increase the depth of the pewter. The ball tools are used in a small circular motion.

Pewter mirror mounts

It's always wise to start by doing a few small things first so that you know how

The tools used to model the pewter vary in shape to work small or large sections within a design.

to approach each section of a design with confidence before embarking on large scale items.

You can either make a frame from a single piece of pewter and cut out the centre part (which can be re-used for something else) or adapt the design to a corner piece. The frame can be used for photographs instead of a mirror.

Alasdair Ogilvie

Mirror frame modelled in pewter. The centre is cut out and can be re-used.

You will need:

Tools as listed on previous page.
Pewter 30cm x 30cm (12"x12"), this is enough to leave you a piece on which to practise.
Pewter patina.
Metal polish.
Filler.
1 mirror tile, 15cm (6") square.
The design on tracing paper.
Hard surface such as a tile or a piece of glass.

□ Trace the pattern on to tracing paper and repeat it three times so that it forms a square with an oval in the middle.

□ Place the pewter with its brighter side facing upwards on the working surface. This will be the front or 'right' side of the pewter.

□ Secure the design on the pewter with adhesive tape. You can make the frame in one piece and then cut out the centre or make four corner sections and use them individually or combine them on the mirrored tile.

□ Go over the design with the tracing tool. Check the back of the pewter to make sure that you have not missed any part of the design, or lift part of the tracing paper and check the results.

□ Make sure that the design is com-plete and that all the lines meet, ie there must be no little gaps between the lines forming the outline. Remove the tracing paper.

□ Place the pewter with right side facing upwards on a single thickness of duster and using the tracer go over the design with enough pressure to leave an imprint on the metal. This must be done carefully. Once there is a mark on the pewter it cannot be removed easily and must therefore become part of the finished object.

Work slowly and follow the exact line of the design. Turn the pewter as necessary so that you work from left to right—or right to left—whichever you find easier. Do not work in a direction where you find it difficult to handle the tracer (this applies to all the modelling tools).

□ Turn the pewter over and work on the back surface. Draw a line just on the inside of the design using the

Trace pattern for one corner of the frame. Repeat it four times to form the frame illustrated.

tracing tool. Concentrate on the main outline of the design and any lines that outline a section to be modelled. Exclude fine lines which detail interior parts of a section. These are added later. This line on the inside of the design forms a slight edge. If you now turn the pewter the right way up you will see the design slightly lifted.

□ Place the pewter wrong side up-wards on two thicknesses of the duster.

□ Use a modelling tool or a ball tool and start pushing the pewter out by moving the tool backwards and for-wards. Work only on those parts of the design which are to be raised. Do one section at a time using a tool suited to the size of the section being worked, ie a small section will need a small tool that fits within its lines, and a larger section will need a larger tool to push it out evenly. The ball tools are best used for circular shapes where a ball-like effect is required.

□ Place pewter right side up on a hard, flat surface such as an old tile and press area around design flat using the wooden or bone tool. This keeps the work flat and prevents it from buck-ling.

□ Part of the design might buckle when you flatten the surrounding pew-ter so it might be necessary to do a bit more tooling to restore the section. Carry on like this until the work is flat and the design is intact.

□ Add any small detail lines to the design still working from the back and with the pewter on the duster. If you add lines from the front you must work very lightly so that you don't push the raised sections down.

□ Once the design is complete and the surrounding area is flat fill the recesses at the back of the pewter. Do this carefully and do not let the filler spill on to any part of the design which has
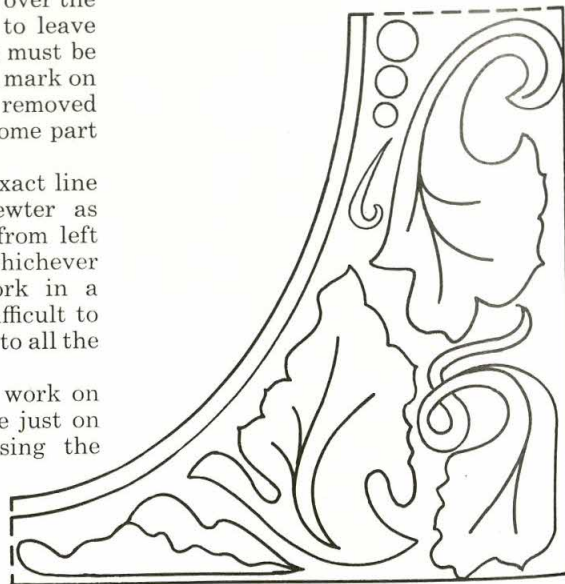
not been raised. Allow the filler to harden.

☐ Clean the pewter well with scouring powder and make sure the surface is not greasy by wiping it with methylated spirit.

☐ Apply the pewter patina to the entire design and leave it to dry for a few minutes. The pewter must be a dull, dark, almost black colour. If any bright pewter shows the metal must be polished again and more patina added.

☐ To highlight the design use a little metal polish on a duster and go over the pewter lightly. Do it slowly and check the pewter at intervals until you achieve the effect you want. The more metal polish you use the lighter and more metallic the pewter becomes. The pewter takes a lot of polishing. Keep at it and don't get impatient—good results do require some effort.

☐ Apply metal varnish if you wish.

☐ Using the curved scissors carefully cut out the design.

☐ Apply all-purpose adhesive to the back of the pewter and position it on the mirror.

☐ Once it is dry check around the edges to see that they fit against the mirror. If there is a slight gap use a modelling tool and gently work the side of the pewter so that the gap closes.

Covering boxes

If you are covering a flat surface, such as the lid of a box, you will not cut out only the design but the area around it to fit the lid. This surrounding area must be kept flat. Use a bone or wooden tool or wrap a bit of tissue paper around a modelling tool to prevent it from scratching the pewter surface. Use the flatter part of the tool and, working on a hard surface, gently push any uneven parts of the pewter back into position.

Cut out the pewter slightly larger than the lid surface. Apply adhesive to the back and position the pewter on the lid. Fold the excess parts of the pewter down the sides of the lid.

Background texture

You can decorate the background of a design once the design is complete but before polishing it. Using a tracer you can 'spot' the entire background or concentrate around the outline of the design and decrease the 'spots' as you move away from the design. You can also use a ball tool in the same way for a softer effect. Lines can also be scrolled freehand to cover the background but some designs lend themselves to straight lines.

Jewelry made from pewter. The modelled pewter is mounted on to metal blanks. Designer Barbara Maynard.

Peter Heinz

Mounting jewelry

The design in pewter must fit on to a metal blank. Model and fill the pewter as before and set a stone if you want to. Cut out the design from the pewter slightly larger than the outline. Cut little V-shapes into the excess pewter so that the point of each cut stops just short of the outline. Glue the design to the blank and fold the excess area to the back of the mount.

Cut out another piece of pewter to fit the back of the blank and glue it in position for a neat finish. Glue jeweller's findings to the back if necessary to complete the jewelry.

Setting stones

To set a stone it must be incorporated as part of the design. Draw the stone's outline at the required position on the design. Leaving this part flat model the rest of the design, fill and polish it.

Draw a line just inside the outline of the stone (fig.1).

Using the curved scissors cut out the flat part where the stone is to be set (fig.2).

Place the pewter on the stone and gently work it over the stone.

Place the stone and pewter on to mounting and glue them in position (fig.3).

outline of stone to be set

1

2

back view

3
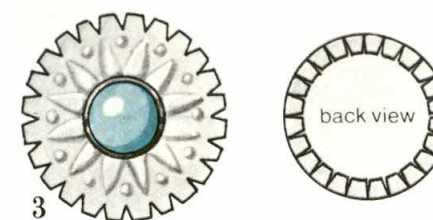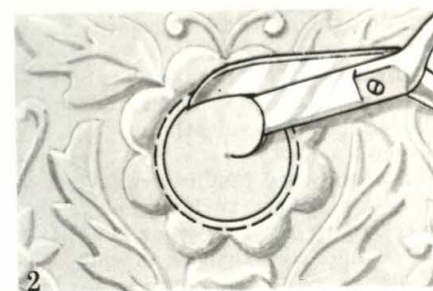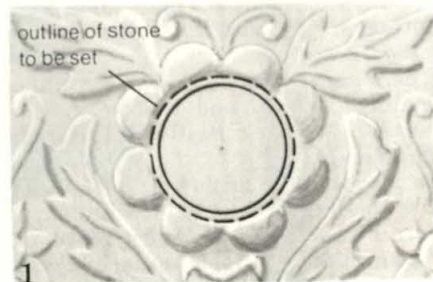
1. *First stage to set a stone.*
2. *Cut out inside with small scissors.*
3. *Outline cut and folded to the back.*

Paul Williams

Beginning to work with suede

Leather has always played an important part in fashion. Its roots are found in the use of raw skins by primitive man and its use has progressed into a world wide industry covering footwear, fashion garments and accessories.

Leather is a fibrous substance comprising a closely interwoven system of fibres that will 'give'. The system is porous to air and water vapour, giving the animal protection from the elements but enabling it to perspire and keep cool.

Before they can be worn by man skins have to be processed, tanned and finished.

Suede for garments

In the main, leather for garments comes from sheep, calves, pigs and cows, although goat and kid skins are also used.

There are basically two forms of leather: suede and nappa (grain) leather (which is dealt with in later chapters).

Suede leather is made by gently abrading the flesh side of skin while nappa (grain) leather is made by putting a finish on the grain side, either by dyeing or pigmenting.

To give the usable area of a skin a uniform thickness the substance sometimes has to be levelled by shaving (known as splitting or skiving) on the grain side of suede leather and on the suede side of nappa leather.

Sheep

This is the most readily available type of leather in most parts of the world.

Sheep reared for mutton as in the United Kingdom and New Zealand are widely used for producing suede suitable for general purposes.

Finer suede leather is made from coarse wool and hair sheep living either in unfavourable environments or in tropical countries where their skins more closely resemble that of a goat.

It is possible to buy washable suede, processed from certain types of sheep by a special tanning technique.
Size: 0.46-0.74 sq m (5-8 sq ft).

Hide leather (usually cow)

Until very recently this was only suitable for shoes, and much of it was sole leather. Then modern technology found a way to use it for clothing leather. Now the grain can be split from the suede layer giving two pieces of leather from one hide. The nappa layer is very lightweight, but it is difficult to get suedes as light.

Suede splits. The suede split from hide leather is generally the cheapest suede available and although it is not ideal for clothing it is widely used and it is good for a beginner's first attempts.

Goat and kid

The grain is very bold and the suede is very fine.
Size: 0.37-0.65 sq m (4-7 sq ft).

Pig suede

The bristle holes give this suede a distinctive pattern. It is difficult to get this leather uniformly soft.
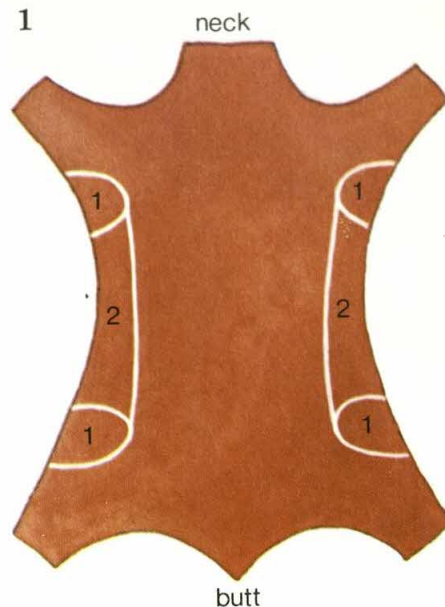Size: about 1.02 sq m (11 sq ft).

Skiver

This is very thin leather obtained by splitting sheepskin.

Grades of leather

Leather is sold in various grades. The grades are determined by the usable area of the skin (fig.1), for ex-

1. *A sheep skin. The leg area (1) and the underbelly (2) are both areas of weakness which should be avoided wherever possible when cutting out.*

ample from Grade 1 it is possible to cut a large perfect panel.

Remember that animals do not come in uniform sizes. In addition the usable areas may be reduced by the natural characteristics of the leathers, such as scars. Leather, like wool, also varies slightly from one dye lot to another and it is essential to buy sufficient leather when making a garment as it may be difficult to match at a later date. Spare scraps always come in handy for belts, bags and appliqué work.

Bags of scraps are obtainable from many leather suppliers which is useful if you wish to start with small items such as belts and purses.

Working with suede

This chapter covers the simple techniques of cutting, fringing, gluing, appliqué, inserting eyelets and applying fasteners. At the end of the chapter there are simple instructions for making a belt from suede 'petals'; and an interfaced belt with a clasp.

Cutting. Suede can be cut using ordinary dressmaking shears, or special leather scissors. It is essential that scissors or shears are sharp not only to make cutting easier but to help with accuracy.

Fringing. Hems of skirts and jerkins can be fringed for a decorative finish. A short fringe can be rolled around the ends of a thong to make a tassel for a drawstring bag.

Cut the fringe evenly using a craft knife and steel rule, shears or leather scissors. The width of the strips depends upon personal choice and the type of article the fringe is decorating. Thongs can be cut in suede in a similar way for decorative use. Thonging cut from suede splits is fairly strong but it is better to use bought thonging if strength is necessary.

Gluing. A latex adhesive, such as Copydex, is best as it sticks on contact, but apply sparingly as it may leave a mark on suede. If you do get Copydex on the right side of suede, leave it to dry and then scratch the surface of the adhesive with a pin and pick it off.

Note: latex adhesive, such as Copydex, dissolves in dry cleaning. This does not matter if adhesive is used in conjunction with stitching, but if an item is joined exclusively by gluing then dry cleaning is not advisable.

Sometimes, as when making a belt from odd pieces of leather, it may be necessary to join the leather to give a sufficient length. The join should be made diagonally. It is usually best to stitch the pieces together if the belt is unlined. (Stitching is described in Leather, chapter 3.)

The join can, however, be glued. Using a craft knife, skive (scrape away) seam allowance on the right side

of one piece and the wrong side of the other piece (fig.2). Smear one seam allowance with adhesive and, with your fingers, press one on top of the other (fig.3).

Alternatively, glue both seam allowances, leave until adhesive becomes transparent and press together.

Appliqué. The term appliqué in this context means gluing suede shapes on to an article made in suede. This can look most effective on belts and bags. Stitching is often added round the edge of the motif in order to secure more firmly.

Eyelets. Eyelet holes are used to join two pieces of suede together decoratively with a thong. It is best to glue and turn back about 2.5cm (1″) on either side of the join, before inserting the eyelets about 1.3cm (½″) from the fold, as there is quite a lot of 'pull' on such a join.

Eyelets are available in several sizes and colours. These and various tools for fixing them are available from craft suppliers. One way to attach them is to punch a hole in the suede and, using the appropriate attachment on a pair of multi-purpose pliers, to fix the eyelet on to the suede.

Another type of tool is one which comes in two pieces: a small metal disc with a hole in the centre, surrounded by a groove on one side, and a metal rod with a projection at one end. Punch a hole in the suede. Then place the metal disc, with grooved side uppermost, on a firm wooden surface (such as a bread board) and place eyelet right side down in the centre (fig.4a). Place hole in suede over eyelet. Take the part of the tool with the projection, place the projection in the hole in the eyelet and tap the other end firmly with a hammer (fig.4b). This will close the eyelet firmly on to the suede.

Press studs can be obtained in a range of sizes and colours and consist of four parts; two form the top of the stud and two the bottom (fig.5).

A simple type of tool for fixing them comes in three parts: a small metal disc with a depression in one side and two metal rods, one with a projection at one end and the other with a hole at one end.

Punch a hole of the appropriate size in the piece of suede to which the top of the stud is to be fixed.

Place the metal disc, with depression uppermost, on a breadboard. Put the upper part of the top stud in the depression (fig.6a). Place the hole in the suede over this then the lower half of the top, with projection through the suede and centre of upper part. Place part of the tool with the projection into the stud and gently hammer it flush (fig.6b).

Attach the two parts of the bottom stud

in a similar way but use the part of the tool with the hole in the end.

Ring spring fasteners (heavy duty press studs) make good belt fastenings. The tool is similar to that used for press studs, but consists of just two parts: a disc and a thin rod with a projection at one end. The end with the projection is used for fixing both top and bottom sections of the stud (fig.7).
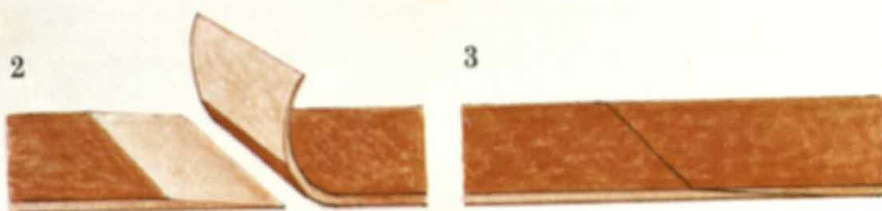
2. *The seam allowances on two pieces of suede skived prior to gluing.*

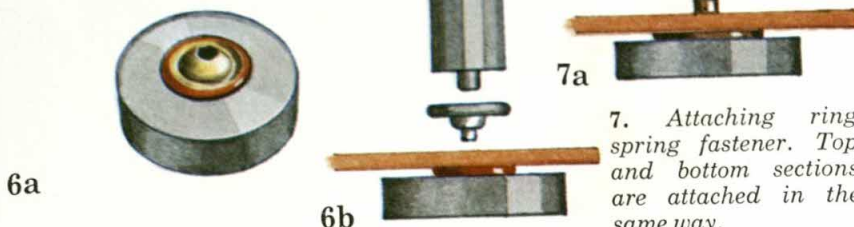**3.** *One seam allowance is smeared with glue and the two pressed together.*
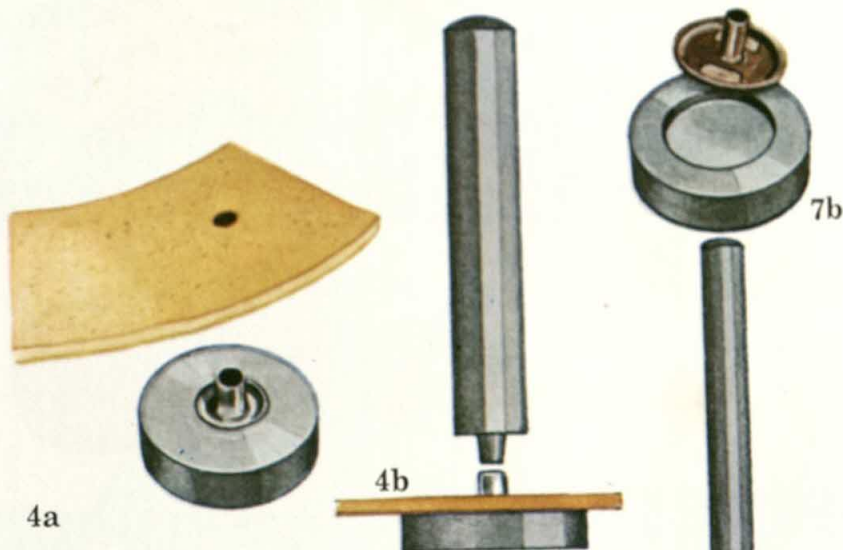
4a. *Eyelet placed right side down on the metal disc.*
4b. *Attaching eyelet to suede using the metal rod.*

5. *Studs come in four parts: two form the top and two the bottom of stud.*

6a. *Top of stud placed right side down on metal disc.*
6b. *Attaching stud to suede using tool with projection.*

7. *Attaching ring spring fastener. Top and bottom sections are attached in the same way.*

Barbara Firth

Petal belts

This is a good way to use up small scraps of suede. A belt for a 66cm (26″) waist takes twelve petals.

You will need:
Scraps of suede, at least 9cm x 19cm (3½″x7½″), and some long enough to cut 30cm (12″) thongs.
Latex adhesive.
Tracing paper.
Card for template.
Ballpoint pen.
Leather scissors or dressmaking shears.
Leather punch.

☐ Make a template from the trace pattern (fig.8).
☐ Working on the wrong side of the suede, draw out as many petals as you need using a ballpoint pen. To determine the length of the petal, measure from the centre to the slot (finished length of petal, less the overlap).
☐ Cut out, cutting slots in all but two petals which will be at centre front.
☐ Starting at centre back place two petals flat, with right sides facing, and machine stitch the two together across the centre (fig.9). (Use the largest stitch and a natural thread.)
☐ Fold each of these petals in half and glue.
☐ Thread a single petal through right hand slot (fig.10), fold in half and glue wrong sides together. Continue to end, finishing with a petal without a slot. Work in the same way from left hand slot to other end of belt.
☐ Punch a 6mm (¼″) diameter hole centrally in each of the centre front petals, about 2.5cm (1″) from the end.
☐ Cut four circles from suede with 3cm (1¼″) diameter.
☐ Punch 6mm (¼″) diameter holes centrally on two circles. Glue a circle on the inside of each end of belt matching holes.
☐ Cut ten thongs, 30cm (12″) long by 3mm (⅛″) wide. Thread five thongs through each hole and secure ends with glue around hole on right side (fig.11).
☐ Glue the other two circles in place to cover the ends of the thongs.

Lined belt with clasp

The belt is 5cm (2″) wide when finished. The finished belt should be to your waist measurement, plus about 5cm (2″) ease. The clasp will probably add this amount to the belt size but, if not, adjust length of belt accordingly.

You will need:
Belt clasp to fit 5cm (2″) wide belt.
One strip suede 8cm (3″) wide by waist measurement, plus 8cm (3″), for belt.
One strip of skiver or suede 5cm (2″) wide by waist measurement, for lining.
Iron-on belt backing or iron-on, non-woven interfacing 5cm (2″) wide by waist measurement, plus 8cm (3″).
Latex adhesive.

☐ Iron interfacing, centrally on to wrong side of belt. Use a cool iron (fig.12).
☐ Fold the long edges of the belt on to the interfacing and glue.
☐ If the clasp is a heavy one apply glue to the wrong side of the lining and glue in place over the interfacing to cover the belt turnings.
☐ If the clasp is light thread it on and secure as described below before attaching the lining.
☐ Thread one half of the clasp on to each end of the belt, turn 4cm (1½″) at each end of the belt on to lining and secure with glue.

Alternative finish

If you prefer a belt with a conventional buckle, cut the belt about 25cm (10″) longer than waist measurement for an overlap. Cut interfacing shaping one end only as shown (fig.13). Cut lining to finished size of belt, ie 4cm (1½″) shorter than outside of belt to allow for attaching buckle. When sticking edges of belt on to interfacing, trim away any excess at the point with scissors as shown.
Finish the belt by punching holes in shaped end and threading a buckle on to the straight end securing in the same way as a clasp.

Warning: when using a ballpoint pen ensure it does not 'leak' and avoid getting ink on right side of suede.
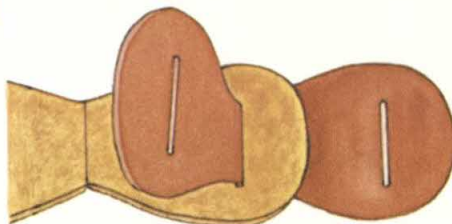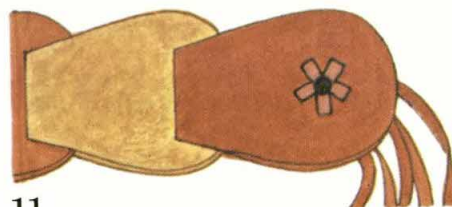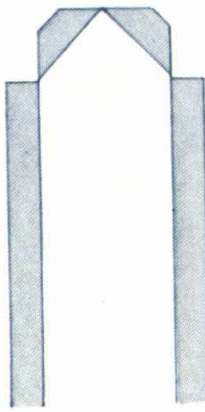
8
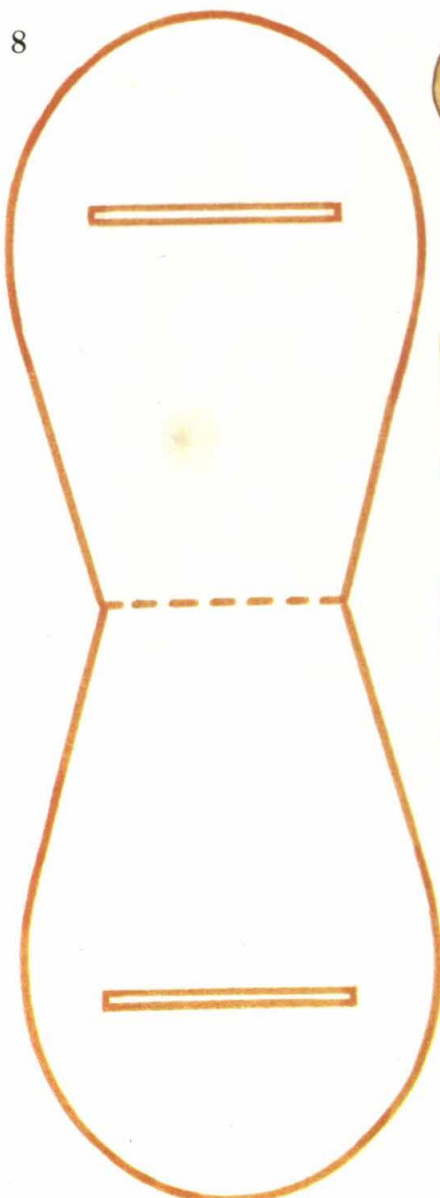
9

10

11

12   13

8. *Trace pattern for petal belt.*
9. *Two centre back petals stitched.*
10. *Threading petal through slot.*
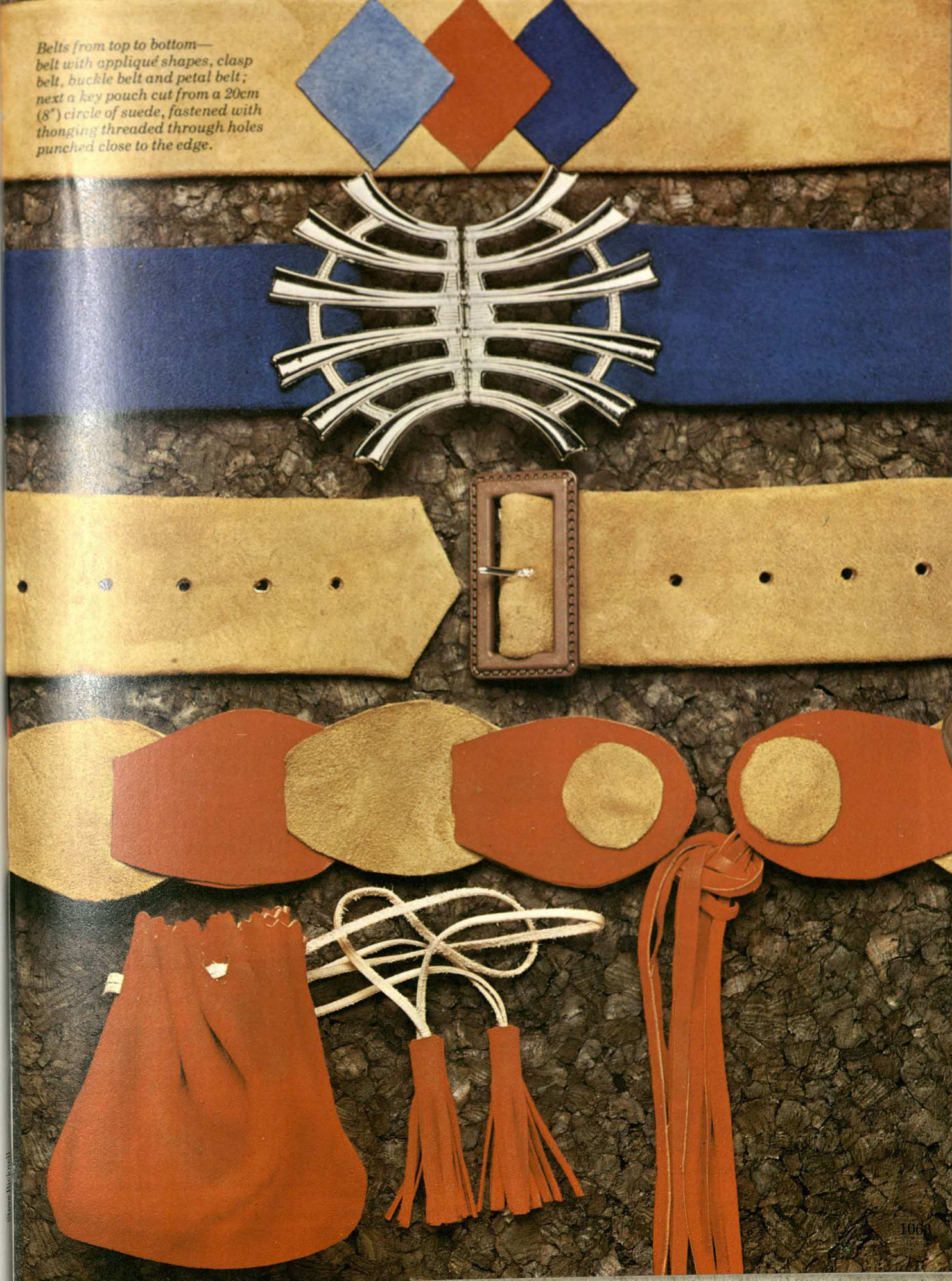11. *Ends of thongs secured with glue.*
12. *Interfacing ironed to clasp belt.*
13. *Interfacing ironed to buckle belt (shape one end only).*

Barbara Firth

Belts from top to bottom—
belt with appliqué shapes, clasp
belt, buckle belt and petal belt;
next a key pouch cut from a 20cm
(8″) circle of suede, fastened with
thonging threaded through holes
punched close to the edge.

1060

work directly on this surface.

Whatever your display group bear in mind that immediate surroundings are most important. Where are the objects to be shown? Shop, exhibition or living room? What will be the background? Wall, dresser or table? What is the colour of the wall behind, and the style of furniture in the room? And remember to stock up on useful props if you are exhibiting or selling: a plaster head for modelling a hat shows off the hat much better than pinning it to a wall.

Types of grouping

There are all sorts of ways you can successfully group your objects, depending on quantity, size, shape and so on. There are a number of styles and arrangements and, once you have tried these, you could experiment with any number of variations.

Straight line (fig.2) is one of the simplest arrangements. Everything is laid side by side as if standing on a line, generally horizontally, but sometimes vertically. This grouping can be a simple arrangement of three or four pictures on a wall or a border, frieze or edging round a door, for example, where the various objects are approximately the same size.

There are several other ways of effective grouping and these will be discussed in the following chapter.

Your craft work may be beautifully designed and executed but, unless it is attractively arranged and displayed, it will either look isolated or lost in a jumble of other objects.

Generally speaking, a successful display group should possess a variety of shapes, textures, sizes and colours. There will probably be degrees of importance of interest within the group, one object being the focal point and the others in a supporting role. Of course some groupings make an impact through the repetition of shape and pattern and this will sometimes make a very successful display.

Planning. However you arrange your work it will look at its best if you take care at the planning stage. Play around with the objects to be displayed, arranging and re-arranging them until you are satisfied. Do your planning on the floor, or other flat

surface, rather than attempt to juggle everything along a vertical wall.

Firstly, estimate how much of the wall is to be given over to the display. Then take a length of string and mark out an area of the floor the same size and shape as the wall.

Place your objects within the boundaries marked out by the string. You may have to leave some things out and add others. Keep relative sizes, shapes and colours in mind. Watch the space within the grouping; this is as important as the objects themselves (fig.1).

Remember to keep the overall design balanced and in proportion (Design know-how, chapters 33-37, pages 924, 952, 980, 1008, 1036.) When you are satisfied transfer the objects to the wall, keeping the same grouping as before. Make final adjustments.

Of course if you are designing a display of craft work on a flat surface
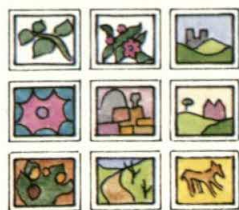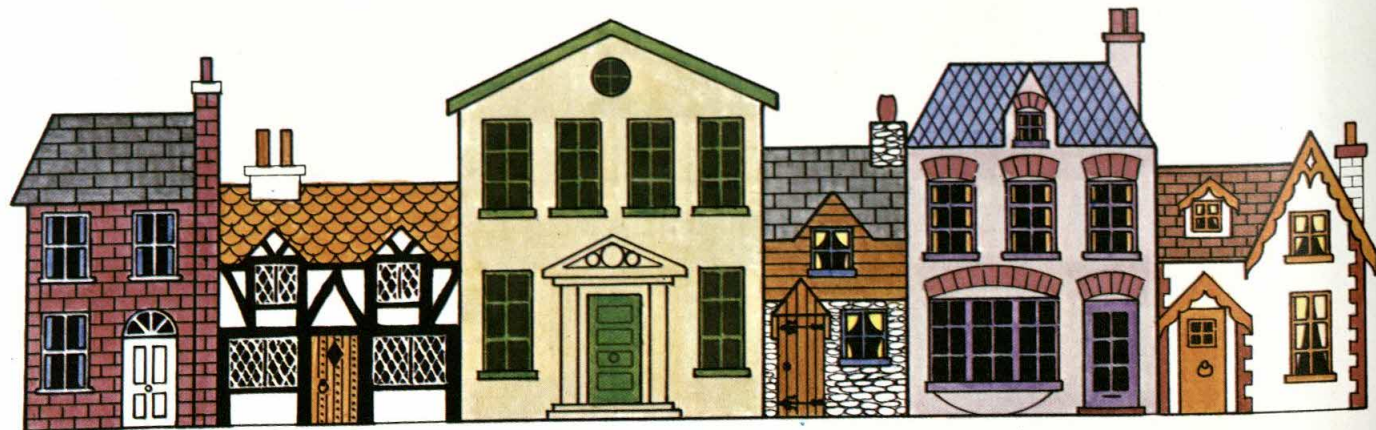

1.a *A well-blocked group.*

1b. *Too widely spaced and diffused.*
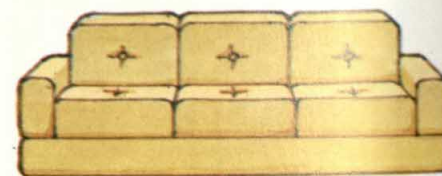
2a. *Straight line group along a settee.*

2b. *A variety of houses along a street front makes a strong straight line useful for friezes, borders and so on.*

Paul Williams

Creative ideas 38

Pompon cushions

Here is an attractive way to use pompons—cover a cushion with them. Use rainbow colours for bright cheery covers or as shown here — a monochromatic scheme.

You can either knit cushion covers or else make them from any evenweave cotton or wool fabric. For a cushion with a finished size of 35cm (14") square, you will need sixty-four pompons. To help you work out quantities: 25gm (1oz) of wool will make four pompons.

Cut card circles for pompons 5cm (2") in diameter and the centre hole 2cm (¾") in diameter.

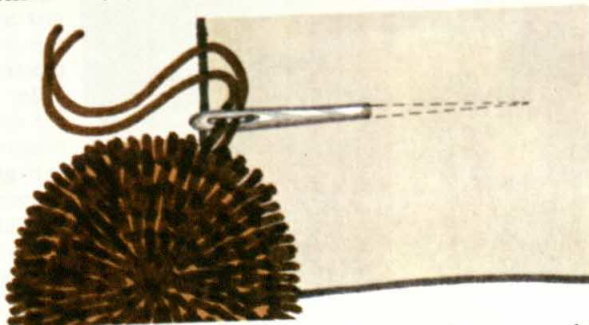When tying the centre of the pompons leave long ends to attach the pompons to the cover. Thread the

Pulling long strand through to wrong side of cover fabric.

Put your whole family to work making pompons (see Creative Ideas 8, page 225) for these cushion covers.

long ends through a darning needle and pull through to the wrong side of the cushion cover. Secure each pompon with a strong backstitch. They are attached in eight rows of eight on the front of the cover before making up.

When complete, stitch three sides of cover together, insert pad and oversew remaining side closed.

You can adapt this idea to any size or shape of cushion.

More materials for collage

Other materials besides paper can be incorporated into a collage and worked into a design to give greater depth and atmosphere, or to highlight a certain aspect of the composition.

Basically, the methods are the same as previously described in Paper chapter 27, page 1038. To make these collages, you will need the same materials and tools as before—plus, of course, additional materials of your choice and adhesives suitable for sticking them down firmly.

Unification by colour

An interesting collage can be made quite quickly and simply by putting together all sorts of objects and materials that are not necessarily closely related in subject matter, but are unified by a colour scheme.

The three-dimensional 'Red and Silver' collage illustrated here is a well executed example of this style.

As you can see, the oddments used in the collage are very diverse. They could have resulted, all too easily, in a messy composition that would prove tiring to the eye. But, because the designer has disciplined the work, the various oddments are clearly held together to form a very pleasing composition.

The two main elements of restraint involved are careful use of colour and basic simplicity of line.

Note how the background silver is picked up again and again throughout the design, first by the silver braid, then with the toy bike, Melinex disc, necklace clasp and safety pins.

Equally the use of red is well balanced with some solid blocks of colour (shiny surfaced paper squares, bricks raided from the children's toy box, and the ballpoint pen), and other, lighter, more airy touches—the playing cards and the amusing sparkling teardrop shapes from a broken necklace.

Stark simplicity has been used to arrange the background shapes. Not only are the red paper shapes set firm and square, but the rest of the composition has been built up to echo their careful formality.

Note the emphasis on upright vertical lines in positioning the crossword puzzle, the transparent plastic ruler, the king of diamonds and even the plastic letters. This gives a sense of order and provides an excellent foil for small areas of movement. In fact, it is precisely because of this restrained background that the directional arrangement of safety pins and the angled elephant card gain in impetus and so successfully lead the eye to the central focal point of the composition.

Raid wastepaper baskets, tool, toy and sewing boxes for collage materials.

Melvin Grey
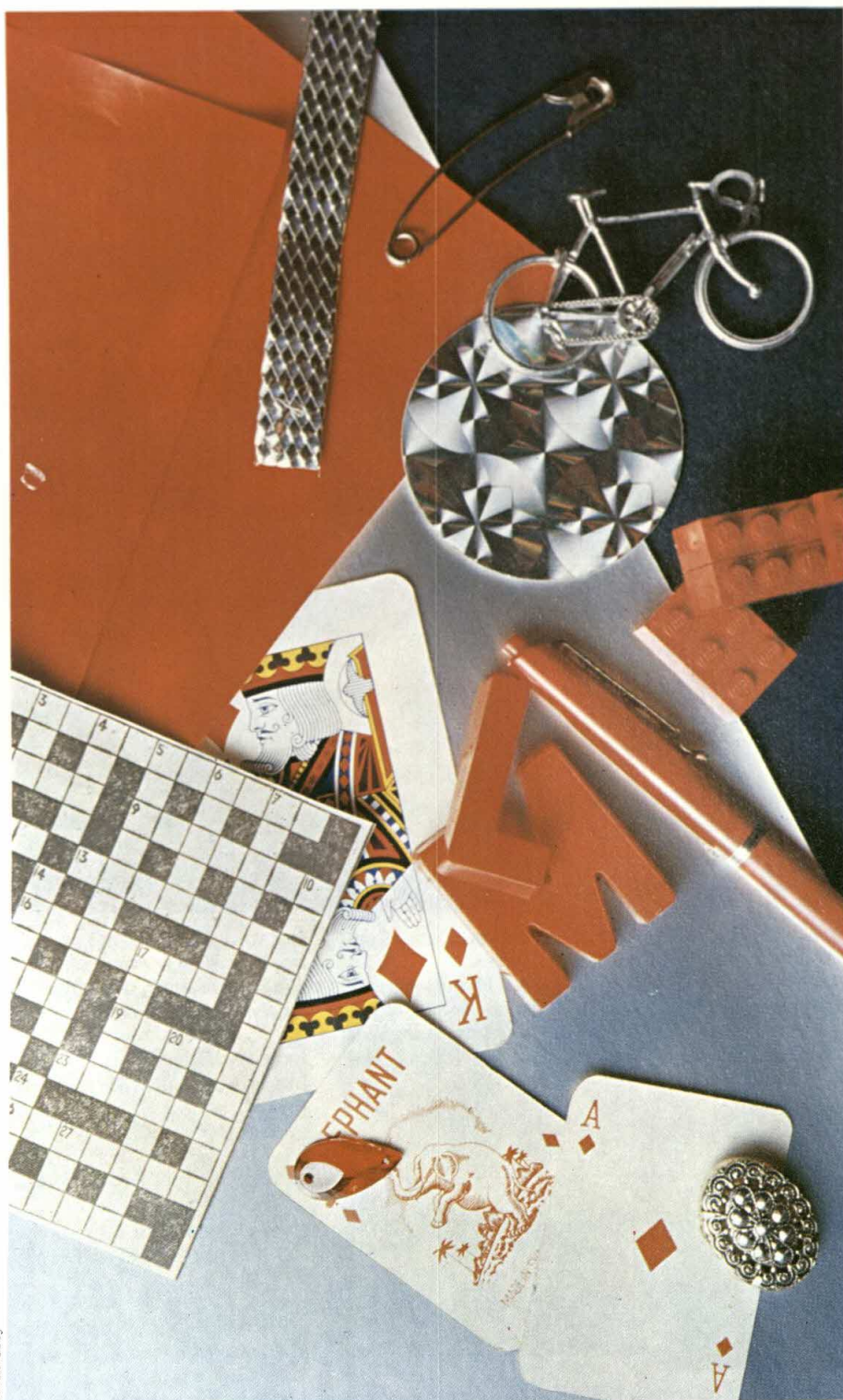
Shiny red squares mounted on silver are the foundations for building a starkly simple background.
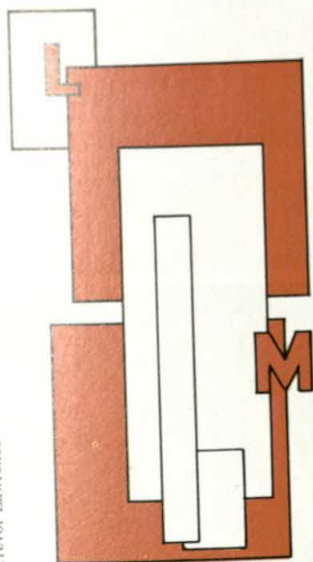
More vertical lines and use of red echo the formality—and act as foil for final touches to the collage.

Using contrasts for impact

A very effective method of emphasizing the interest of a paper collage is to incorporate other materials the textures of which contrast strongly with the paper—thus throwing each and every item into bold relief.
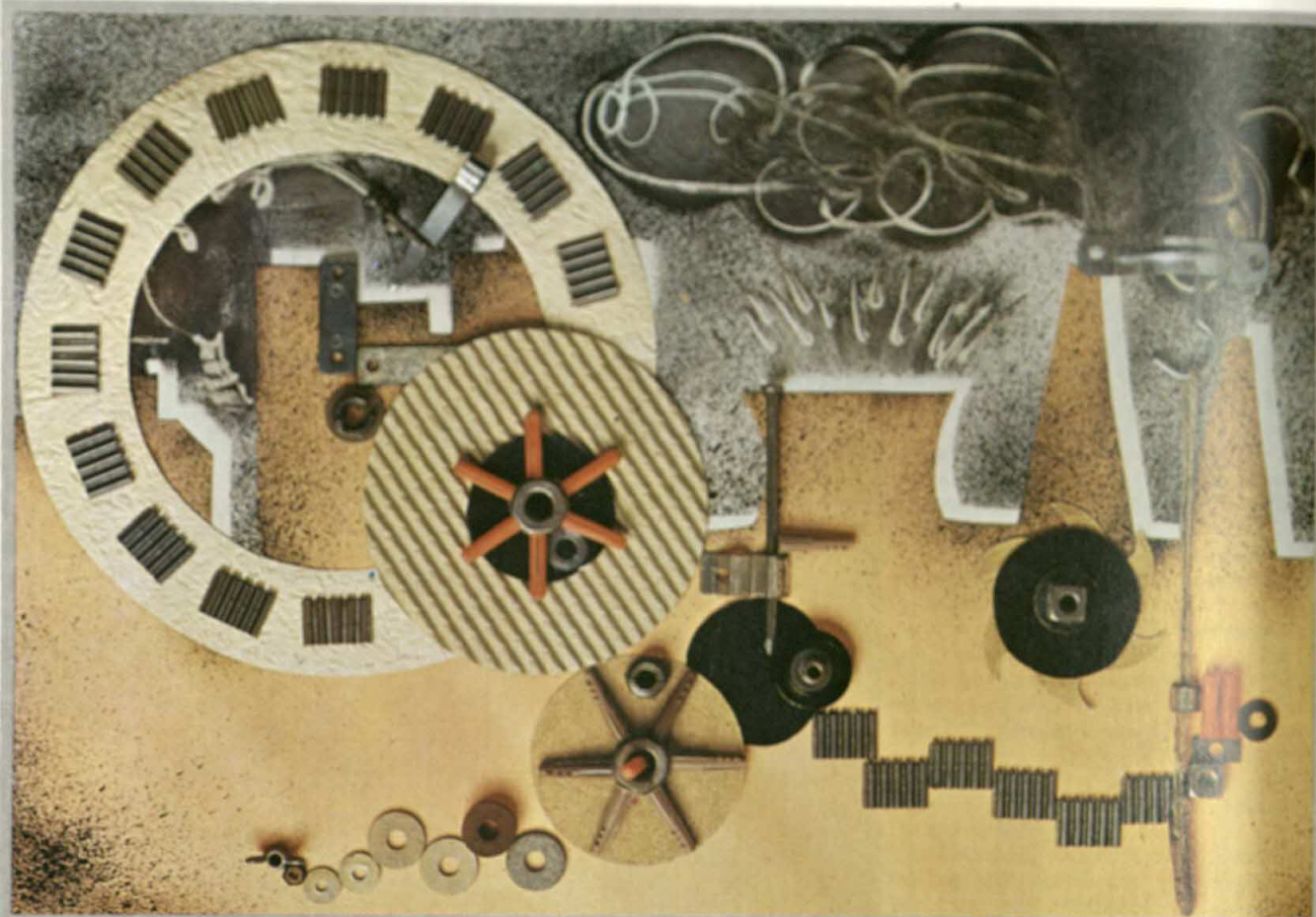
The three-dimensional collage 'Industrial Revolution', overleaf, is an extremely powerful example of this method. Papers, plastics and metals have been combined to produce an exciting marriage of strange contrasts, and the design is such that the collage has tremendous visual depth and atmosphere.

The skyline factory chimneys have an almost frighteningly explosive quality. But clever composition draws the eye through menacing belches of smoke, down the heavy, swinging, crane-like bars and hooks and ropes, into the comparative peace of the production line. Here rows of materials and repeated interlocking cog-shapes churn

'Red and Silver' collage by Liz Cooksey (as are the others illustrated here) manages to co-ordinate a wide variety of objects into one cohesive composition. Repeated use of vertical lines for background shapes, and restriction to two basic colours, cleverly prevents the collage from becoming too 'busy'.
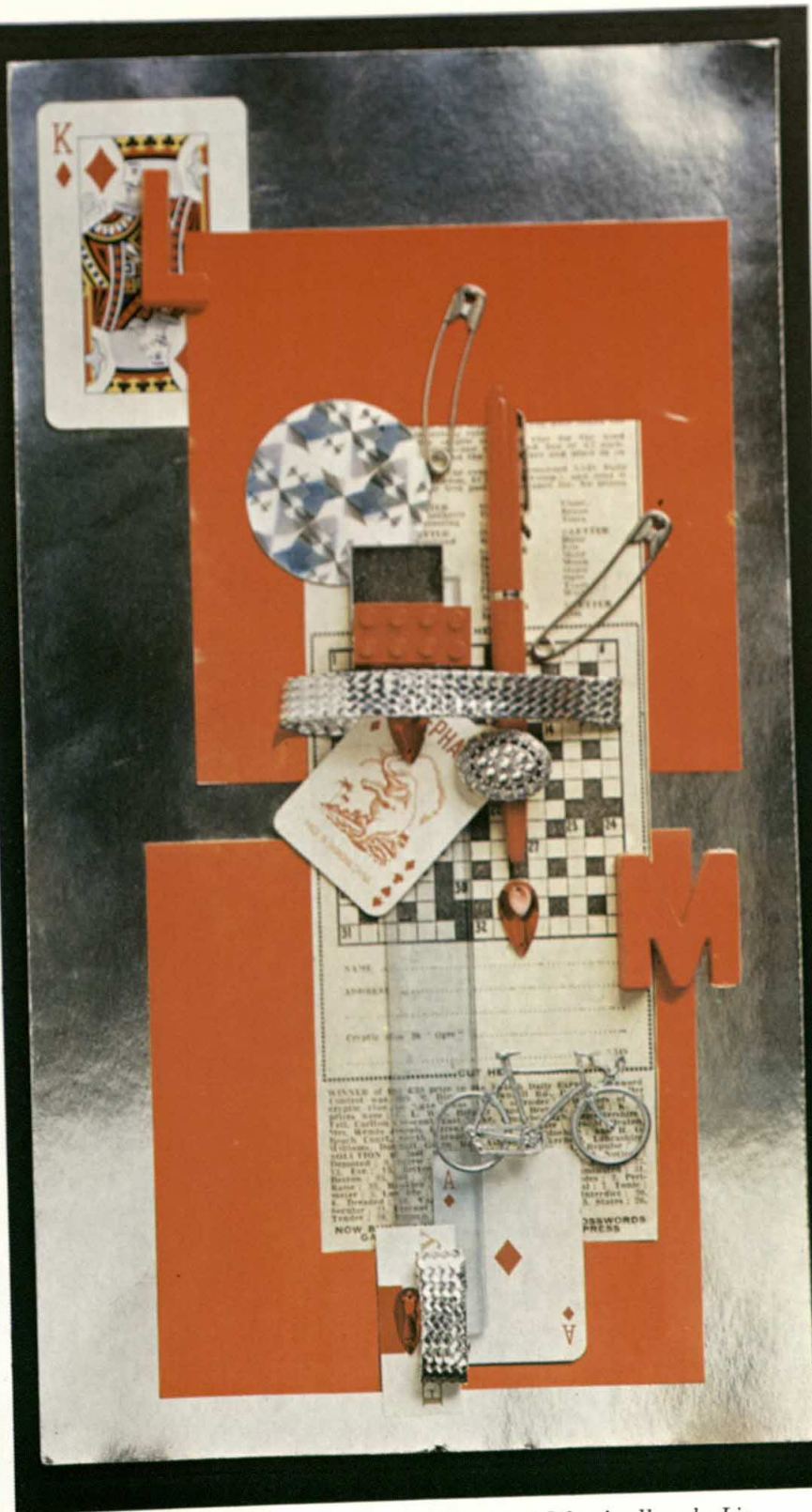
Dick Miller

'Industrial Revolution' is a powerful three-dimensional collage in which paper, metal, plastic and a strong sense of design combine to produce a composition of great visual depth and atmosphere.

on with a sense of purpose and provide the collage with a reassuring sense of symmetry and rhythm.

The background sheet of paper is in fact white. Cut the orange sheet slightly wider than the background paper and cut to give silhouettes of factory roofs, chimneys and cooling towers. Hold orange against white and spray with black water colour or watered down black ink (you can use an old tooth brush and a knife for spraying). Dip the brush in the liquid, then stroke the bristles with the knife— see illustration. Before the spray is dry a piece of damp cotton wool is lightly swirled across certain areas to produce a smoky effect. The orange paper is then moved slightly to the left, trimmed to fit and glued down, leaving sharp white margins between black spray and orange buildings. The white smoke lines are drawn with adhesive— squeezed direct from the tube on to the paper (this is done before ink spraying but remains white because it resists the ink). Add tweaked out wire wool later.

Other papers are heavily textured: sandpaper, corrugated paper and textured wall-paper, all cut in circular shapes of varying sizes. Metal and plastic objects raided from the tool box are cleverly combined and superimposed to give precise, machine-like

Melvin Grey

Sprayed watercolour or diluted ink makes interesting spattered effects. Dip an old toothbrush in the liquid, hold over the paper to be decorated and stroke the bristles with a knife. Draw the knife towards you or you will spray yourself with the colour.

detail. Note how the line of the crane is counter-balanced by the long masonry nail (the only two vertical lines in the whole composition), and the flowing row of small round objects at bottom left is balanced by groups of corrugated fasteners (bottom right) also forming a waving line.

Creating harmonious effects

The introduction of other materials need not necessarily result in a collage with such forceful impact as 'Industrial Revolution'. Very subtle effects can be achieved by using one type of paper only, showing every aspect of that paper, and then adding other materials which, although quite different in texture, echo the same qualities and tone as the paper itself.

An example of such enhancement is shown in the charming 'Chesspiece Knight' collage photographed here. Newspaper is a wonderful and inexpensive source of material. It is used in a highly decorative manner for the knight, so as to show to full advantage the many variations of newsprint—from tightly printed dark areas and bold headlines interspersed with white, through grey photographic areas, to creamy white spaces.

The paper is pleated, scalloped, fringed and double folded for added interest and the non-paper details (bits and pieces taken from sewing and jewelry boxes) make delicate finishing touches. The broken chain necklet, trouser hooks and eyes, shirt buttons, pearl and scraps of sandpaper harmonize with their background—nothing jars. Their colours reiterate the creamy, grey, black newsprint tones, and they seem to fit quite naturally into this decorative composition.

Protecting your collage

If a collage is simply made for fun, there is no need to protect it with a coat of varnish or glass and frame. In any case, a collage that is firmly glued will last for ages and can be kept dust free with the occasional quick flick of a feather duster. If you wish to preserve your collage really carefully, however, you can spray it with varnish or mount it in a stepped frame. Collages that are quite flat could alternatively be covered with sticky backed transparent film, such as Transpaseal.

'Chesspiece Knight' decoratively reveals all the subtle variations of newsprint. Alternate dark and pale areas are cut in different shapes and ways, then highlighted with a few complimentary accessories taken from jewelry and sewing boxes. Always start from the bottom when building up decorative paper layers of this sort.

Glass fibre lampshade

In the previous chapter a plastic tray was made by moulding resin-impregnated glass fibre over an already-existing tray. This technique can be used for any number of projects; all you need is a suitable mould and two basic raw materials: glass fibre cloth and laminating resin. When cured the glass fibre reproduces the exact shape of the mould.

In this chapter a plastic mixing bowl is used to make a lampshade. It could equally well make another bowl or even a hundred lampshades—one mould can make any number of objects.

Instead of adding pigment as in the last Plastics chapter you can include a layer of thin, patterned cotton fabric. This looks very effective if you match a tray to curtains or a table cloth. Follow the directions for making the tray leaving out the pigment and placing the fabric between a very even front gel coat of resin and the layers of glass fibre so that the fabric design shows clearly. (Make sure the resin is a clear type.)

The lampshade

The lampshade is a simple curved shape embellished with embedded tissue paper hearts and decorated with a scalloped edge and a fringe. Although it is made from an upturned bowl there is nothing clinical about it; it gives a soft, glowing light.

You will need:

Tools. See Plastics chapter 13, page 1014.

Hacksaw (optional).

Hand drill and small bit (optional).

Materials. Glass fibre is bought by the metre (yard) and you will need:

Chopped strand mat, 45cm (18″).

Surfacing tissue, 90cm (3′).

Rigid laminating resin with the addition of 10% thixotropic paste already mixed; about ½kg (1lb).

Catalyst (hardener) comes in 56gm (2 oz) bottles. You will need less than half of this.

Emulsion wax release agent.

PVA (polyvinyl alcohol) release agent.

Two or three sheets of tissue paper in various colours.

Acetone and polyester resin detergent for cleaning tools.

Epoxy adhesive such as Araldite (optional).

Medium wet-and-dry abrasive paper.

Metal polish such as Brasso.

Barrier cream.

Fringing, about 90cm (3′), to decorate the lampshade (optional).

A low-heat light bulb, ie 40 watt. Alternatively, use a cold ray bulb which is designed to produce very little heat. An ordinary bulb will heat up the plastic too much.

Lamp fitting and lamp base. Since the lampshade rests on top of the lamp fitting buy a fitting which allows for this. It is a good idea to take the finished lampshade along to the shop before buying.

A mould such as a plastic mixing bowl. The lampshade illustrated was made from a bowl measuring 20cm (8″) in

Romantic lampshade made from resin, glass fibre and heart-shaped pieces of tissue. Designed by Jane McCarthy.

Dick Miller
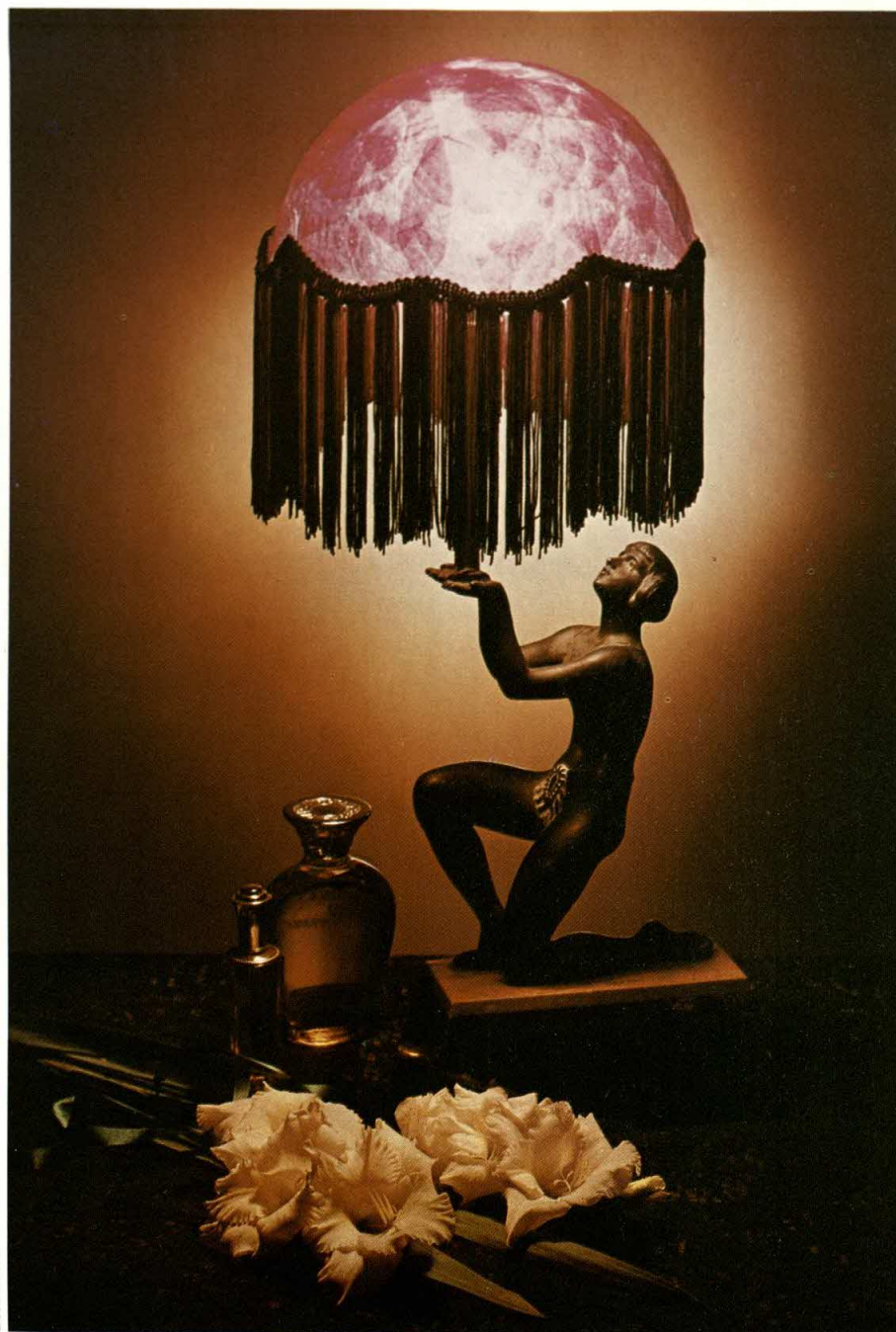
diameter. It is important to choose the right sort of mould, ie one with sloping sides (fig.1), otherwise you will find difficulty in pulling the lampshade out of its mould.
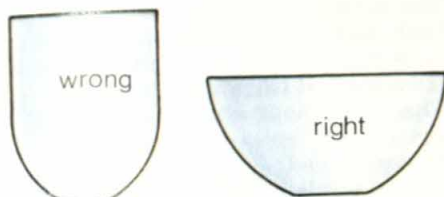
1. Choose a mould with sloping sides otherwise it may be difficult to extricate the finished object.

☐ Open the windows for good ventilation, lay down newspaper on the working surface, arrange all tools and materials, put on an apron and cover exposed skin with barrier cream.

☐ Wash and thoroughly dry the bowl. It is not necessary to make a mould from the mixing bowl. Since it is the same shape inside as well as outside it is perfectly satisfactory as a mould itself (Plastics chapter 13, page 1014). Use the bowl as a female mould, ie the inside of the bowl is coated with glass fibre.

☐ Polish the inside of the bowl with emulsion wax, followed by a coat of PVA release agent (fig.2), following the instructions in Plastics chapter 13, page 1014. Make absolutely sure you

Paul Williams

2. Use a small sponge to apply the PVA to the inside of the bowl.

have completely covered the surface with PVA; this is coloured blue so you can see if you have left any bare patches.

The gel coat. Apply a thin layer of resin to the inside of the bowl. The thickness of the gel coat should be about 3mm ($\frac{1}{8}''$).

☐ Weigh approximately 113gm (4oz) of resin and add 9-10 drops of catalyst to each 1oz (28gm). Follow manufacturer's instructions if in any doubt as to the quantity of catalyst needed.

☐ Paint a coat of activated resin on the inside of the bowl. The resin will tend to slip down towards the bottom of the bowl so push it up the sides with the brush.

☐ Wash out the brush in acetone and

leave resin to gel for about an hour.

Laminating. Make a paper pattern to fit the inside of the bowl. Cut out one sheet of chopped strand mat and two sheets of surfacing tissue equal to the area of the bowl plus a little over all the way round.

☐ Cut out tissue paper hearts or any other chosen shapes.

☐ When the resin has gelled carefully place most of the tissue shapes on to the resin, keeping the design simple and checking that there are no air bubbles trapped underneath (fig.3).
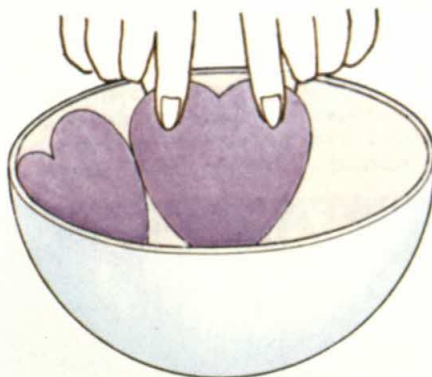
3. The tissue hearts or shapes give colour and design to the lampshade.

☐ Mix up the rest of the resin with catalyst and apply a thin coat of resin over the paper shapes taking care not to disturb them.

☐ Lay on the first layer of surfacing tissue and with the brush stipple the glass fibre into the resin to remove air bubbles and ensure that it is thoroughly impregnated with resin.

☐ Place more paper shapes if needed to complete the design.

☐ Paint on another layer of resin and lay the chopped strand mat on top of this, stippling the mat into the resin with the brush.

☐ The final layer is surfacing tissue which is stippled into the resin as before. Paint on another coat of resin if needed otherwise use as little resin as is necessary to impregnate the glass fibre.

☐ Wash out the brush in acetone and resin detergent.

☐ When the resin gels trim the edges of the glass fibre with a trimming knife such as a Stanley knife.

Leave the lampshade overnight and then the shade should pull out of the mould with ease. If it does not then place the mould in hot water followed by cold water.

To finish. Smooth the edge of the lampshade with abrasive paper. If making a lampshade with a scalloped edge cut out the curves with a hacksaw. Although the lampshade is quite safe to use with a low-wattage bulb you may like to drill three or four small holes in the top of the lampshade to let the heat escape. Use a hand drill and bit for this.

☐ Polish the outside of the lampshade with a metal polish.

☐ Finally stick fringing round the edge with an epoxy adhesive.

The lampshade can be placed over a table lampstand and lit by a low-heat bulb.

Match up a tablecloth with the same material embedded in a tray. Lay the material over the gel coat and laminate in the usual way. Material designed by Susan Collier for Liberty & Co Ltd.

Melvin Grey

Combinations for unusual effects

Previous patchwork chapters deal with some of the more common patchwork shapes and how to handle them. There are many exciting ways in which these can be combined to create unusual effects, a few of which are shown here (figs.1-3).

There are specific instructions for making a cushion like two of those in the photograph (the centre one and the one at the front right). The design appears to be complicated but is simple. This chapter also covers some of the less common patchwork shapes and shows how they can be used alone or combined with more familar shapes.

The cushions

Both cushions have been made in the same way by using a basic long triangle of diminishing size and an effective colour arrangement.

The pattern is drawn straight on to thin card which is then used for the 'papers', although you could make a template first from thick card.

The instructions are for a 50cm (20″) square cushion.

You will need:

Scraps of plain cotton fabrics in five colours.

Sewing cotton.

Thin card.

50cm (20″) square cushion pad.

Zip (optional).

☐ On thin card draw a square with sides of 19cm (7½″). Mark the centre of each line and join the centre of one line

to the centre of the adjacent side. Repeat all round the square.

☐ Find the centres of the lines in the new square (these lie on the diagonals of the original square) and join them in the same way. Continue this process until six squares in all have been drawn (fig.4).

☐ Cut along the card carefully to separate the triangles and the square.

☐ Using these pieces as patterns cut out the fabric allowing turnings all round. Cut two of the largest triangles from the first colour and the remaining two from a contrasting colour.

☐ Use two more colours for the next size of triangle.

☐ Alternate this colour sequence until the other three sizes of triangle have been cut out. Use the fifth colour for the centre square.

☐ Tack the fabric to the papers folding the turnings to the wrong side (Patchwork chapter 5, page 1048). When all the patches have been tacked assemble the design on a flat surface and, starting at the centre and working outwards, stitch the patches together with tiny oversewing stitches (Patchwork chapter 3, page 208).

☐ Make seven more square blocks in the same way.

☐ Stitch four square blocks together so that opposite triangles match in the centre. Press work on the wrong side before removing the papers.

☐ Repeat with the other four blocks.

A selection of patchwork cushions made by combining a few simple shapes. The secret of success is in the careful choice of colour.
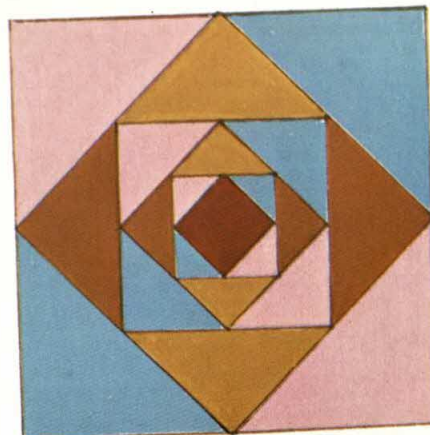

1. *Squares and church windows.*
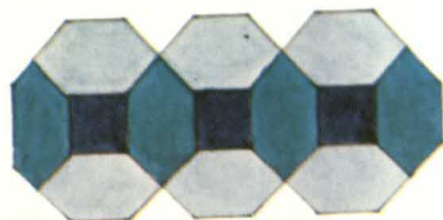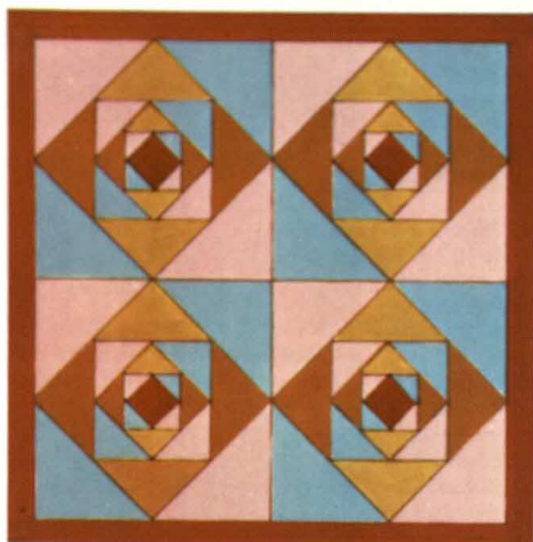

2. *More church windows and squares.*

3. *Honeycombs and lozenge diamonds.*
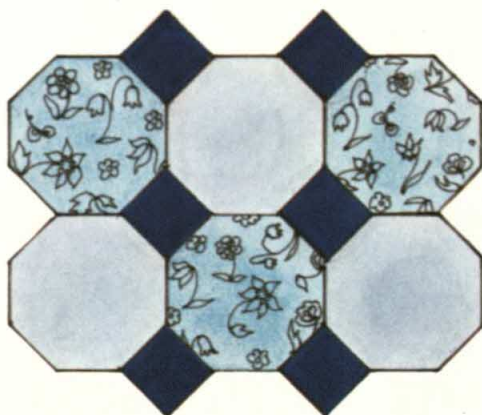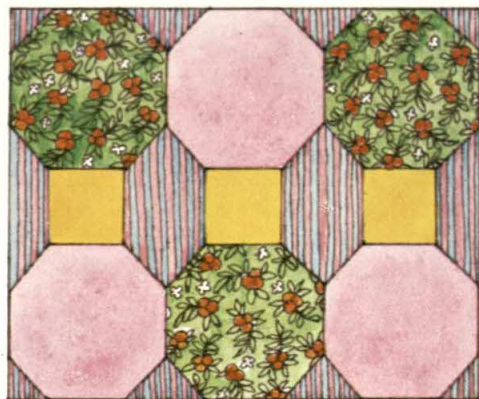

4. *Pattern for a block of the cushion.*

Gwen Simpson

5

5. *Four trapeziums stitched to a cushion square.*

6

7

6, 7. *Two successful ways of using octagons.*

Gwen Simpson

Basic shapes

B Extended rectangle

A

Octagon

C

F Pentagon

D Trapezium

E Rhomboid

G Adapted pentagon

Trevor Lawrence

☐ For the outside border, cut from thin card, eight 2.5cm (1″) deep trapeziums with longer, parallel side of each 43cm (17″) and the shorter parallel side of each 38cm (15″).

☐ Use these shapes as papers for fabric of the same colour as the central square in each block. Cut out, making seam allowances all round. Tack, then stitch four trapeziums to each square to make a larger square (fig.5).

☐ From thin card cut eight more 2.5cm (1″) deep trapeziums, but make the longer parallel side of each 48cm (19″) and the shorter one 43cm (17″).

☐ Use these as papers for a contrasting fabric. Cut out allowing 1.5cm ($\frac{1}{2}$″) turnings on longer parallel sides (these are essential for making up patchwork into a cushion). Make normal allowances on other sides of the trapeziums. Tack and stitch four
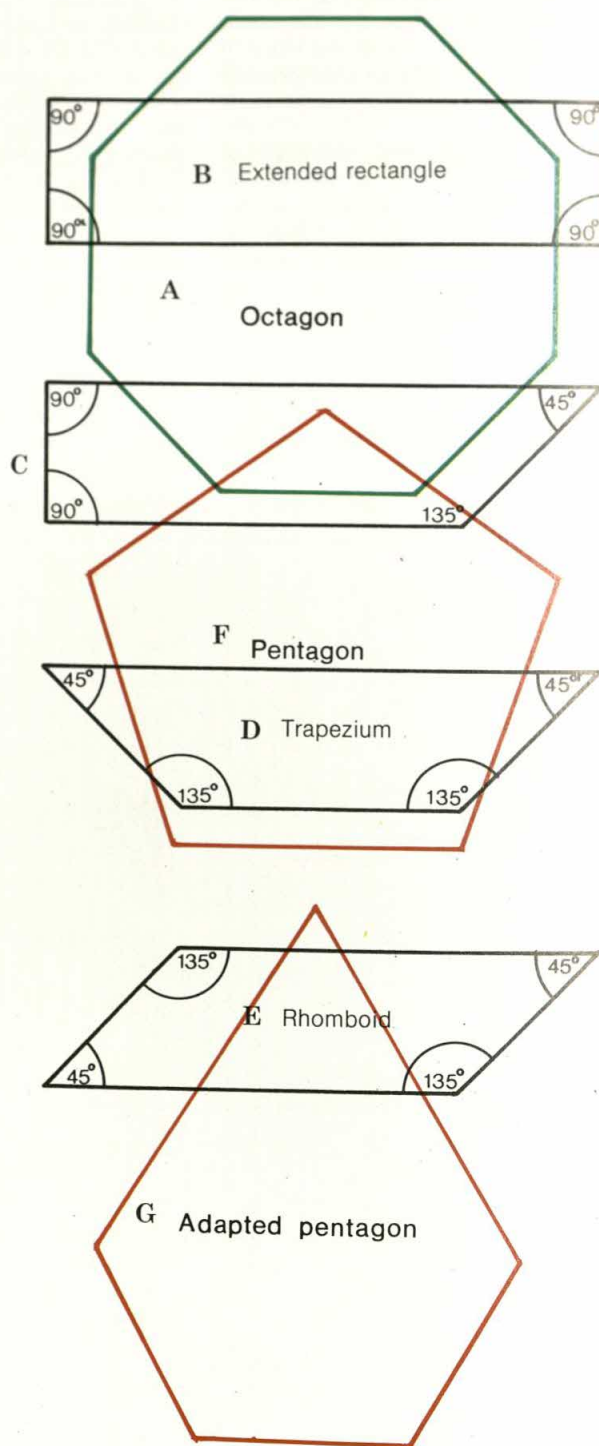
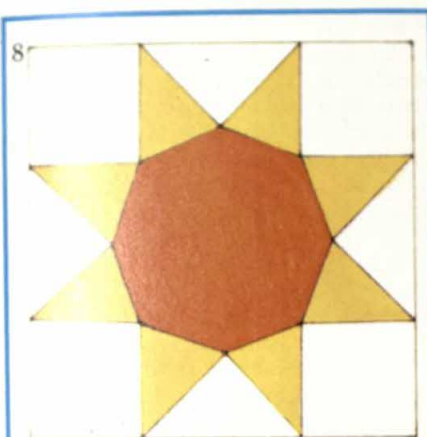to the outside edge of each square in the same way as before.

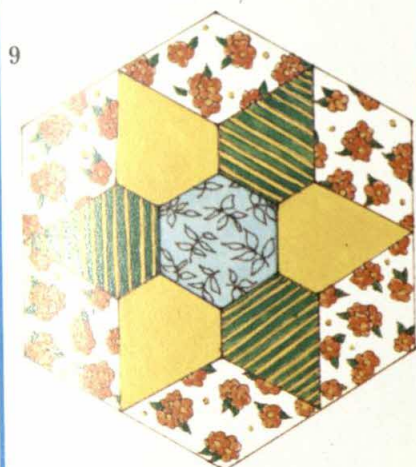☐ Make up the two large squares into a cushion.
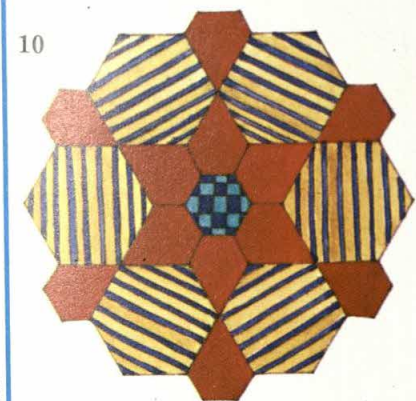
More patchwork shapes

The octagon. Templates of various sizes can be bought for this shape. Alternatively make your own templates from strong card (Design know-how 8, page 224).

8. *Octagon, squares, long and pyramid triangles make a 'sunburst' design.*

9. *Box and star design.*

10. *Alternative box and star design.*

This shape has eight equal sides and all its angles equal (fig.A). It is as easy to make up as the hexagon because of its wide angles.

Octagons cannot be joined together on all sides, but with the addition of a square an attractive continuous fabric can be made. Try combining octagons in a variety of printed fabrics with squares in a constant, plain, dark colour (fig.6). Or combine octagons,

squares and church window hexagons (fig.7).

An octagon combined with pyramids (made by halving a long diamond widthways) and long triangles and squares makes an attractive 'sunburst' pattern (fig.8). This could be repeated across a quilt, alternated with large plain squares or used as a border design.

The strip or extended rectangle (fig.B), the adapted rectangle (fig.C), the trapezium (fig.D) and the rhomboid (fig.E), are useful fill-in shapes.

The pentagon (fig.F) with five equal sides and angles is impossible to use alone for a flat patchwork fabric. Twelve of these pentagons, however, will make up into a ball which could be filled and could be used as a pin cushion, for example.

The adapted pentagon (fig.G). A more versatile type of pentagon is made from a lozenge diamond with one point cut off.

An attractive box and star design can be made from a hexagon, adapted pentagons and lozenge diamonds (fig. 9). A variation is made from a small hexagon, adapted pentagons and large hexagons (fig.10).

Six-point stars of lozenge diamonds combined with hexagons.

Other combinations

There are many other ways to combine shapes. When you have tried the ones shown here, experiment with ideas of your own.

Quilt and bolster made largely from blocks using squares and long triangles.

Forming a firm fabric

One of the quickest methods of creating a fabric in macramé is with alternating flat knots (see Macramé chapter 6, page 1046). Alternating flat knots can be worked closely together to form a dense, firm fabric as shown in the middle section of the wall hanging overleaf, or they can be worked more openly, as in the shopping bag.

Estimating the amount of yarn. If the knots are spaced with about 2.5cm (1″) between rows, allow five times the required finished length for each strand. For knots worked more closely, allow eight times the required finished length. When you have to cut very long strands, mount them first and then wind each end separately in a figure of eight round your fingers and secure with a rubber band so that you can easily let out more length as you need it. This prevents them from tangling.

Peter Heinz
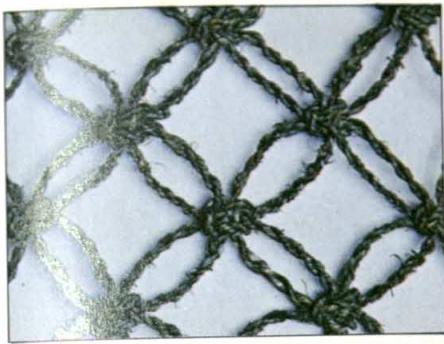
Alternating flat knots worked openly.

Dick Miller
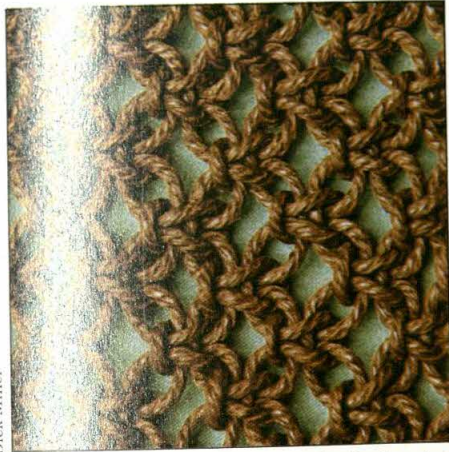
Alternating flat knots worked closely.

The shopping bag

The method for mounting the strands is different from usual in order that both sides of the bag can be worked at the same time without a join at the sides or bottom.

To make a bag 43cm (16″) wide x 60cm (24″) long including handles:

You will need:

Yarn, 1 large ball medium-weight string such as 2-ply sisal.

Macramé board, made from 15mm (½″) chipboard, 40cm x 50cm (15″x20″). The board can be longer than this measurement but it should not be wider as it is the width which governs the final width of the bag.

Ruler, pencil.

Drawing pins, bodkin or crochet hook, clothes pegs.

Preparing the board. Working down from one of the shorter edges, divide the length of the board into 2cm (¾″) sections and draw lines across in pencil on the front and back of the board.

Cutting and mounting the strands. Cut 40 strands of string, 250cm (100″) long. Divide the strands into 10 groups.

☐ Place the strands in each group so that all the ends are level. Work a flat knot in the centre of each group. These knots form the base of the bag.

☐ Pin the flat knots to the side face of

Shopping bags worked in alternating flat knots from sisal are strong and roomy. Designed by Frances Brown.

one of the shorter edges of the board, placing the first and last group 2cm (¾″) in from the left and right and the
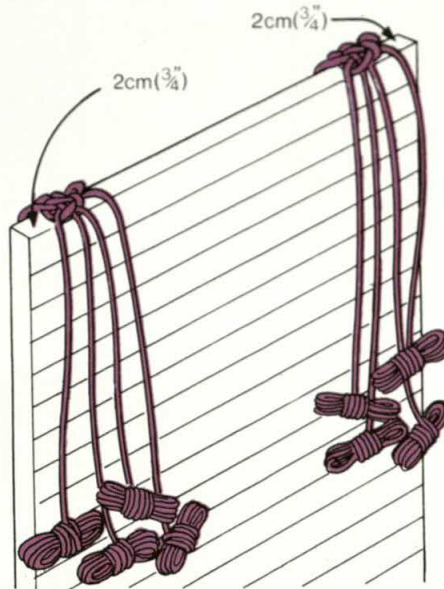
1. Knots pinned to top face of board.

remaining groups with 4cm (1½″) spaces between them (fig.1). Arrange the strands so that four from each group hang on both sides of the board.

Working the knots. Start working alternating flat knots on both sides of the board, using the pencil lines as a guide to the distance between the rows. At the end of the first and subsequent alternate rows, there will be two remaining strands at each edge on the front and back of the board. Take these strands to the side edges of the board and work a flat knot (fig.2). Work 16 rows of alternating knots.
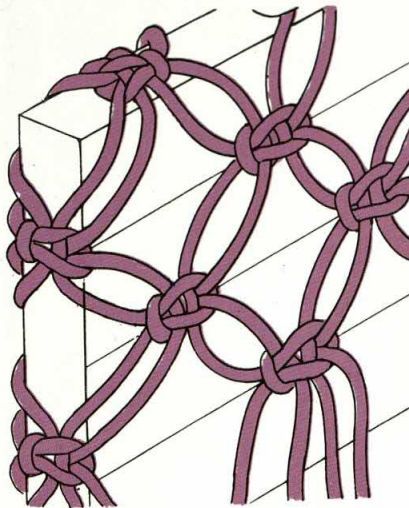
2. The knots are worked on the side edge as well as the front and back.

☐ Divide the groups in four sections (two on each side of the board) and work five rows of alternating flat knots in each section. Remove the bag from the board.

Making the handles. Cut four strands of string each 100cm (40″) long. Wind one strand round two fingers of your hand three times, slip the circle off and use the remaining length to work half hitches (like continuous single cording) over the circle (fig.3).
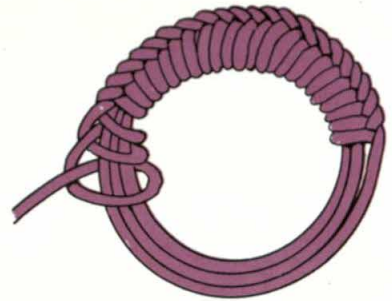
3. Working half hitches over the circle.

Keep the base of the loops on the outside of the circle and do not pull the knots too tightly or they will form a spiral.

☐ Secure the end by using the bodkin or crochet hook to darn it back through the knots. Make up other three strands similarly.

☐ Pin two of the corded circles on to the board so that they are 25cm (10″) apart. Cut a 400cm (160″) length of string and pin one end about halfway between the circles. Thread the other end through one circle and then through the other, keeping the length flat but taut between the two. Repeat three more times and then use the remaining length to work continuous half hitches over the strands (fig.4). Secure the end by threading it over the circle and darning back through the knots.

Repeat for the second handle.

Attaching the handles. Loop the loose ends from the bag through the circles of the handles and secure temporarily with clothes pegs. Cut short lengths of string and whip the loops firmly (see Macramé chapter 5, page 628).

Paul Williams

4. Making a handle for the bag.

Belly dancer hanging

Overall measurements: 70cm x 30.5cm (27½"x12").

You will need:
Yarn, 1 ball of brown medium-weight string.

Two wooden rings, 15cm (6") diameter. Dowelling rod, 13mm (½") diameter x 22cm (8½") long and 6mm (¼") diameter x 30.5cm (12") long.

Macramé board, same size or larger than hanging.

Pins, clear adhesive.

Cutting the strands. From the string cut 28 strands 600cm (240") long, two strands 15cm (6") long and one strand 76cm (30") long.

Working the hanging. Pin the centres of 12 of the longest strands in groups of three on to the macramé board, leaving about 2.5cm (1") between the groups. Work a knotted picot on each group (fig.5).

☐ Double cord the strands on to the 13mm (½") dowel, mounting two extra long strands between each group.

☐ Work the rest of the hanging as shown in the diagram, using the 76cm (30") length as knot bearer for the double cording below the 13mm (½") dowelling rod, and the two 15cm (6") strands as knot bearers inside the top edge of wooden rings. Cut extra strands for the fringe at the bottom of the hanging.

To form the belly button, work 15 flat knots with the six centre strands. Loop the knots up and thread the four middle strands through the fifth knot. Work 8 more flat knots.
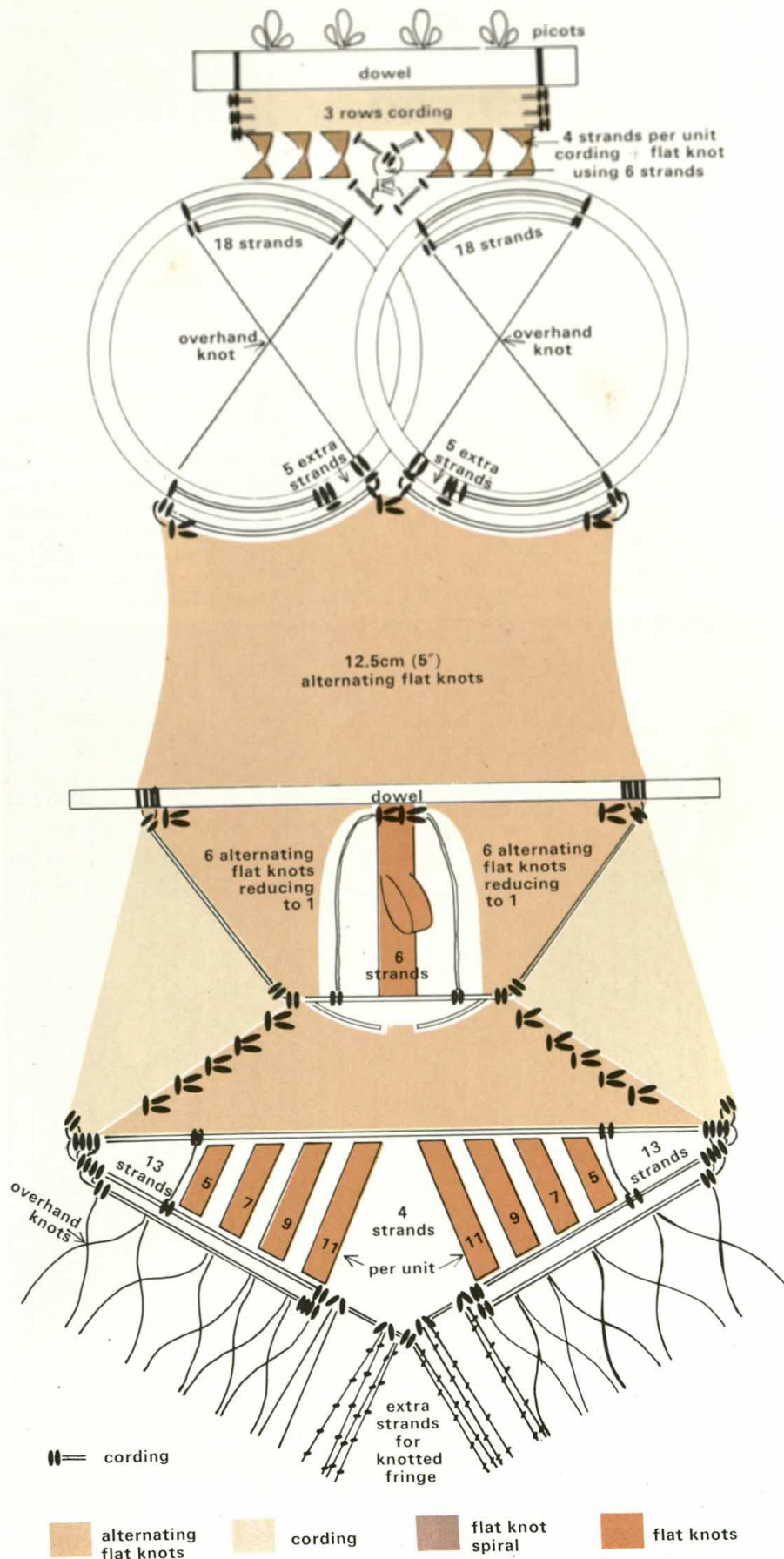
☐ Neaten the ends of the knot bearers by sticking down on the wrong side.
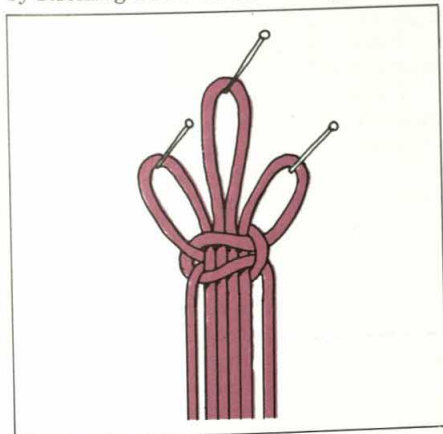
5. *Making a knotted picot.*

Left. Belly dancer hanging, designed by Dorothy Stapleton. The wooden rings, the loop in the middle and fringe at the bottom form the main features.

Right. Diagram showing how the hanging was constructed. Use this with the photograph as a basis for your own hanging and add variations from your repertoire of knots.

picots
dowel
3 rows cording
4 strands per unit cording + flat knot using 6 strands
18 strands
18 strands
overhand knot
overhand knot
5 extra strands
5 extra strands
12.5cm (5") alternating flat knots
dowel
6 alternating flat knots reducing to 1
6 alternating flat knots reducing to 1
6 strands
13 strands
13 strands
overhand knots
5 7 9 11
4 strands ← per unit
11 9 7 5
extra strands for knotted fringe

⫙▬ = cording

| | alternating flat knots | | cording | | flat knot spiral | | flat knots |

1079

Gilding the gingerbread

You will need:

175g (6oz) butter or margarine.
75g (3oz) soft brown sugar.
225g (8oz) black treacle.
125g (4oz) golden syrup.
225ml (8fl oz) milk.
3 eggs.
350g (12oz) plain flour.
1½ teaspoons mixed spice.
3 teaspoons ground ginger.
1½ teaspoons bicarbonate of soda.

☐ Heat oven to 170°C (325°F), Gas Mark 3.

☐ Grease and line swiss-roll or meat tin, about 24cm x 30cm (9"x12"), with greased greaseproof paper.

☐ Put butter or margarine, sugar, treacle and syrup in a pan. Place over gentle heat and stir till butter melts.

☐ Remove from heat, add milk and set aside to cool a little.

☐ Lightly whisk the eggs.

☐ Sift all remaining ingredients into mixing bowl.

☐ Stir in syrup mixture, then the beaten eggs.

☐ Pour the mixture into prepared tin and bake just above the centre of the oven for 50-60 minutes till golden and firm to touch.

☐ Leave in tin for 5 minutes, then turn out on to cooling tray and remove paper.

The Romans first brought ginger to Europe from their African colonies. They used vast quantities of it to flavour a wide variety of foods and drinks, and the popularity of the spice soon spread throughout the continent of Europe.

By the 18th century the use of ginger, in Britain at least, was mainly reserved for cakes and biscuits. Gingerbread in soft moist cake form or with a crunchy biscuit texture was hugely popular, and no fair was considered a worthwhile event if it did not sport a gingerbread stall.

The flavour is still much appreciated today—particularly the delicate warmth of finest Jamaican ginger—and the decorative things that can be made with gingerbread make cooking as fun as the results are delicious to eat.

Making a bunny cake

Ginger flavoured cake is very delicious. Made in a simple oblong shape, the surface can be iced or decorated any way you choose. Small children will need an adult to heat ingredients for them. As to decorations, you can use the suggestions here or conjure up your own ideas—perhaps a bird or butterfly design, not a bunny.

Decorating a bunny cake
You will need:

A piece of card or paper.
2 or 3 cocktail sticks.
1 tablespoon icing sugar.
Butter icing: 25g (1oz) butter or margarine creamed with 50g (2oz) sifted icing sugar.
1 packet sugar-coated chocolate drops.

☐ Place cake on a board. If the top surface is not flat turn cake upside down.

☐ Cut a piece of paper to size of cooked cake. Draw a bunny shape on the piece of paper and cut it out.

☐ Place the bunny shape on top of cake and secure with cocktail sticks.

☐ Put a tablespoon of icing sugar in a sieve and sift sugar over the uncovered cake.

☐ Carefully remove cocktail sticks and lift off the paper. The bunny shape is now neatly outlined in sugar

☐ If desired, the bunny shape can be piped in with the butter icing using a forcing bag and plain icing tube.

☐ Arrange chocolate drops on the bunny to represent ears, eyes and pack. 'Glue' them with butter icing.

Oblong-shaped moist ginger cake can be decorated with a rabbit, baby chick, bunch of flowers or anything you wish. Make a drawing, cut the outline shape and place on top of the cake. Sprinkle icing sugar over uncovered cake, remove outline then decorate with icing and sugar-coated chocolate drops.
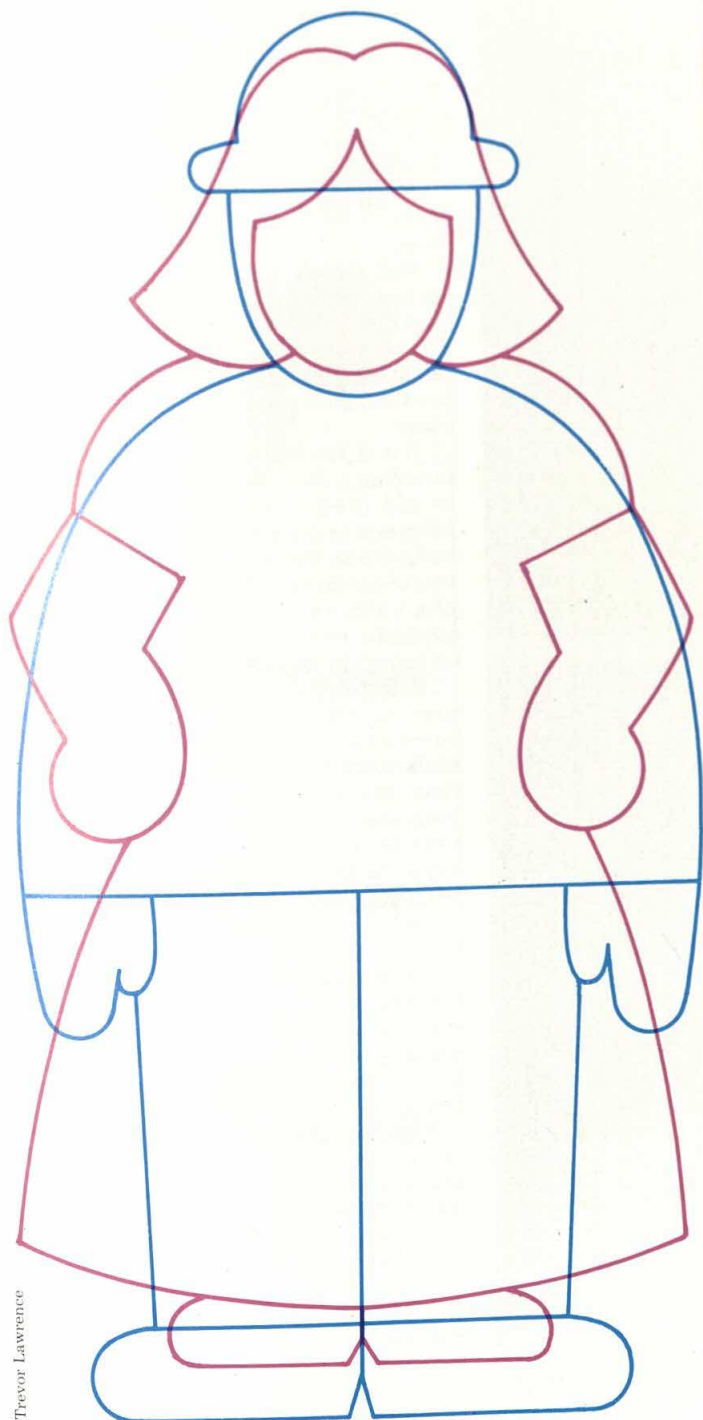

Camera Press

Making gingerbread houses and figures

Most children know the story of Hansel and Gretel, and love gingerbread boys and girls. The traditional gingerbread biscuit recipe given here is easy to make, so children can enjoy assembling and mixing the ingredients with adult supervision. Then there is the fun of deciding on shapes to be cut. (Small children should not, of course, be allowed to heat the butter or put the dough into or remove it from the oven themselves.)

Always keep outline biscuit shapes quite simple as it can be difficult to cut round complicated shapes. Draw the shapes on card, cut out neatly and use as a template to cut the dough. A round bladed knife is best as it cuts dough without tearing.

Gingerbread boys and girls are simply shaped (fig.1) but, once the biscuits are cooked, there is a splendid opportunity for even very small children to indulge in fantasy decorations to complete the edible works of art. Coloured icing, candied peel, hundreds and thousands, currants, nuts, chocolate drops, silver balls and all sorts of sweets can be used. Nimble fingered cooks can make more elaborate biscuits. This gingerbread dough is firm enough to make surface decorations—so you can roll tiny balls and strips of dough and superimpose them on top of the basic cut-out biscuit shapes before cooking. Have fun adding facial expressions and clothes to figures, or decorating walls with ornate window and door frames, rambling roses or what you will. And once cooked, four biscuit walls can be 'glued' to cardboard with a little icing to make a 3-dimensional building.

1. *Trace patterns: gingerbread boy (blue) and girl (pink).*

Traditionally, simple gingerbread figures were decorated with wafers of edible gold leaf—hence the expression 'the gilt on the gingerbread'. This practice ceased long ago but our gingerbread boys and girls can look just as ornate decorated with today's delectably edible 'clothing'

Trevor Lawrence

Camera Press

Camera Press

Traditional gingerbread biscuit

You will need:

1 egg.

1 tablespoon black treacle.

200g (7oz) castor sugar.

2 teaspoons ground cinnamon.

2 teaspoons ground cardamom.

½ teaspoon ground mace.

250g (9oz) butter or margarine.

1½ teaspoons baking powder.

300g (11oz) plain flour.

☐ Place egg, treacle, sugar and spices in a bowl and beat well together.

☐ Melt butter or margarine and, when it begins to cool, blend into mixture.

☐ Sift baking powder and flour together, add to mixture and bind well using your hands.

☐ Wrap the dough in kitchen foil and chill for 30 minutes.

☐ Heat oven to 170°C (325°F), Gas Mark 3 and grease several baking trays.

☐ Roll dough out on a lightly floured surface, making it slightly thicker than usual for biscuits.

☐ Cut into shapes required and place on baking trays. Simple gingerbread boys and girls can all be cooked straight away.

☐ But if the biscuits are to have surface dough decorations now is the time to add them. Use your hands to roll little bits of dough into strips and small balls. Press the decorations firmly into the uncooked biscuits, using the back of a knife, so that the decorations are partially embedded, not simply lying on top of the biscuits.

☐ Test bake a few decorated biscuits first to check your dough is of a correct consistency. Flours vary and a little more may be needed of one type than another. If too much flour has been used the decorations will not adhere to the biscuit during cooking. If too little has been used the decoration will flatten out (fig.2).

☐ Bake one tray first for 15-20 minutes till lightly brown.

☐ Leave for 5 minutes on tray, then transfer to wire rack to cool (if the walls of a house have bulged during cooking, trim them straight with a set square and sharp knife as soon as the biscuits are removed from the oven).

☐ Check that the biscuit decoration is the correct consistency—if necessary knead a little more flour or two teaspoons of beaten egg into the remaining biscuit dough before decorating and baking the remaining biscuits.

Top left: close-up of back wall.

Bottom left: traditional gingerbread biscuit was used to make this highly decorative and rather unusual gingerbread house and delightful group of circus characters and animals.
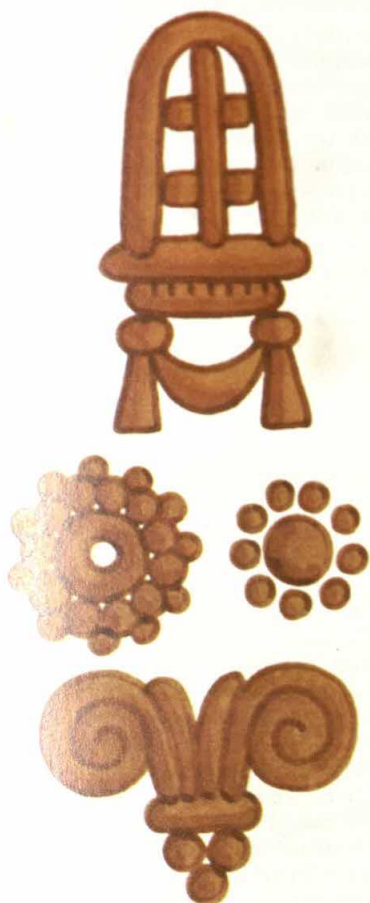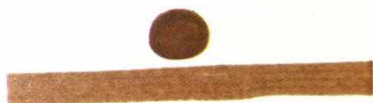
These ornamental designs are made by hand-rolling tiny bits of dough. Press on to biscuits before cooking.

2a. Dough decorations flatten out if too little flour is used.

2b. Decorations stay neatly in position when dough balance is correct.

2c. Decorations do not adhere if too much flour has been used.

Right: close-up of side façade. The four walls are 'glued' with icing to bent strips of cardboard at roof and ground level to make a free-standing 3-dimensional building. Figures, too, can be 'glued' to folded card.

Techniques for sewing suede

This chapter covers the general techniques for sewing suede by machine and by hand, why and how to mount (ie interface or interline) suede and how to punch a decorative design.

There are, in addition, instructions for making two types of purse and a jewelry wallet.

Sewing

Thread. For both hand and machine sewing use a thread in a natural fibre—not synthetic.

Machine sewing

Suede can be sewn successfully on an ordinary, clean and grease-free, sewing machine.

Use a strong thread with a much tighter tension on both the needle and bobbin sides.

You may find it is necessary to adjust the pressure of the machine foot.

But always experiment on scraps to obtain the best results.

Do not allow the skin to 'sit' under the machine foot and dawdle. Feed through firmly from the front of the foot with one hand and hold the suede at the back of the foot with the other hand.

Needles. Use a size 90 (14) on fine suede, eg most washable suedes, and a size 100 (16) on the heavier types. A size 110 (18) is used for very heavy work.

Note: if you experience difficulty with an ordinary machine needle, try using a ballpoint needle.

Stitches. Use the largest stitch (about eight stitches to 2.5cm (1")) on your machine for straight sewing on most suedes and a slightly smaller stitch for very fine ones. If a small stitch is used, the seam will split and separate like perforated paper.

Suede can also be joined using a zigzag stitch. In this case make stitches about 2.5mm ($\frac{1}{10}$") apart and 2.5mm—3mm ($\frac{1}{10}$"-$\frac{1}{8}$") deep. A beginner will find it best to overlap the edges to be joined by about 3mm ($\frac{1}{8}$"). With practice, however, you will find you can butt the edges together (fig.1).

Butting and stitching with a zigzag stitch is ideal for patchwork.

Note: Zigzag stitch looks very effective
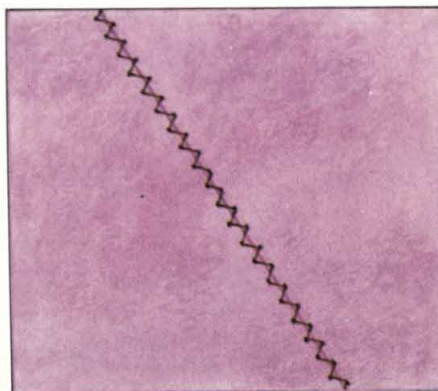
1. *Two pieces of leather cut straight then butted and zigzag stitched together.*

Barbara Firth

when worked round the edges of appliqué (Leather chapter 2, page 1060).

Hammer. A useful piece of equipment is a heavy steel shoe hammer. A thick piece of suede (or grain leather) can sometimes be difficult to machine. But if this is pounded with the hammer some of the 'fight', or resistance, is reduced and it is then possible to machine with a minimum amount of trouble.

This type of hammer, which has a convex (rounded) head, can also be used to hammer down glued seam allowances on heavy suede.

For hammering down seam allowances on lighter suede you can use an ordinary small hammer with the end padded with cotton wool and covered with calico. Never use an ordinary hammer unpadded as the flat end will damage the skin.

Seam allowances. As suede does not fray wide seam allowances are not necessary. Allowances on small items like the purses described here are very narrow and even on garments 1.3cm ($\frac{1}{2}$") or even 6mm ($\frac{1}{4}$") is enough.

Paper clips (or pegs) are the best means of holding pieces of suede together while seaming.

Hand sewing

Needles. When hand sewing use a short 'betweens' needle, size 3-7: size 3 for fine work up to size 7 for heavier sewing.

The reason for using a short needle is that the matt surface of suede tends to hold the needle, therefore the less

distance the needle has to travel the less likely it is to break.

Thimble. It is essential to protect your finger when sewing suede. If you use a normal metal thimble remember to push the needle with the side of the thimble. If you push with the top and slip you could hurt yourself badly.

It is better to choose a thimble with an open top.

Some people wrap a 2.5cm (1") wide strip of leather around the finger two or three times, secure with adhesive, and push with this.

Stitches should be larger than for working on cloth (see machine stitching).

Mounting

One of the attractions of suede is its soft pliable nature. There are times, however, when it must be given a more rigid finish, for example bags and parts of a suede garment. This can be achieved by using one of the iron-on interfacings either a non-woven one, such as Vilene, or woven, like Moyceel.

Follow manufacturer's instructions carefully when ironing the interfacing on to the suede.

Ordinary woven and non-woven interfacing can also be used but it is necessary to stick this in place with adhesive, such as Copydex.

Always ensure that interfacing is cut minus the seam allowance.

Another method of mounting which is sometimes used on bags, but not on garments (except in special circumstances), is to use 3mm ($\frac{1}{8}$") thick foam rubber. This is available from most large stores and is stuck in place with latex adhesive, such as Copydex.

Punching a design

When punching a decorative design on suede it is a good idea to make a template from strong card, punching the design in this, thus avoiding expensive mistakes on the suede and ensuring an even design.

Place the template on the wrong side of the suede and mark positions for the holes in pencil or ballpoint pen before punching out the design.

Strips of contrasting suede, decoratively punched, make attractive trimmings when stuck or stitched on to bags and stitched on to garments.

Clip purse

This purse is quick and easy to make and is perfect for small change.

Overall size 11.5cm x 11.5cm ($4\frac{1}{2}$"x$4\frac{1}{2}$").

You will need:

Small gilt purse frame, 5cm (2") wide by 2.5cm (1") deep with holes for stitching.

2 pieces of clothing suede about 15cm x 17.5cm (6"x7"), in pink.

Strong silk or cotton thread.

Leather scissors or dressmaking shears.

Tracing paper, pencil, ballpoint pen.

☐ Trace off pink outline, lift and draw round shape on wrong side of each piece of suede. Cut out.

☐ Machine stitch the two pieces together on stitching line, with right sides together. Turn through to right side.

☐ With purse frame open and starting at centre of the frame each time, oversew one curved top edge of purse to stitch holes in each side of frame with neat stitches, taking in about 3mm ($\frac{1}{8}''$) of suede with each stitch. As you stitch take in the fullness of the purse evenly.

☐ Tuck the straight piece at each side of purse top to inside and oversew if necessary (fig.2).

Zip purse

This purse is lined with contrasting suede.

Overall size: 16cm wide x 11cm deep ($6\frac{1}{4}''$ x $4\frac{1}{4}''$).

You will need:

Two pieces of clothing suede 22.5cm x 17.5cm ($9''$x$7''$) in flame, plus scraps for tassel and tab.

Two pieces of contrasting clothing suede 22.5cm x 17.5cm ($9''$x$7''$) for lining.

Matching silk or cotton thread.

Leather scissors or dressmaking shears.

Tracing paper, pencil, ballpoint pen.

13cm ($5''$) zip (this is slightly longer than purse top for easy access).

☐ Trace off blue outline, lift and draw round shape twice on wrong side of each piece of suede. Cut out.

☐ Place one piece of lining, right side down, then pieces for outside, right sides facing, and place the other piece of lining, right side up, on top.

☐ Machine stitch through all thicknesses on the stitching line. Do not turn through to right side yet.

☐ With right sides together place zip face downwards on unstitched flaps at top of purse and stitch on stitching line (fig.3). Stitch only as far as end of teeth at 'bottom' end of zip.

☐ Turn purse through to right side and pull through zip tape at 'bottom' end (fig.4).

☐ Cut two pieces of suede in main colour 2.5cm x 3.5cm ($1''$x$1\frac{3}{8}''$) and round off one short end of each piece.

☐ Machine stitch the two pieces together with wrong sides facing and enclosing the end of the zip tape (fig.5).
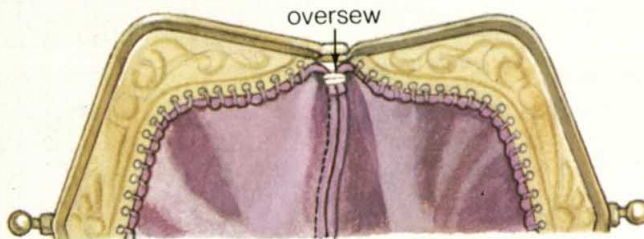
☐ Cut a piece of suede in main colour 4cm x 6cm ($1\frac{1}{2}''$x$2\frac{1}{2}''$). Fringe one shorter end into 3mm ($\frac{1}{8}''$) strips, cutting to 1cm ($\frac{3}{8}''$) of other edge.

☐ Cut off last 3cm ($\frac{1}{8}''$) strip and thread this through hole in zip fastener. Glue ends together and then roll and glue fringe round the ends to make a tassel.
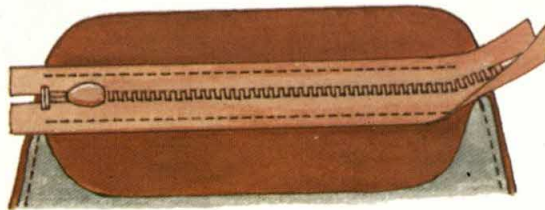

Two purses in suede—A pretty clip purse for small change and a lined zip purse.

Melvin Grey

2. *Oversewing the straight pieces together on one side of the clip purse.*

3. *Stitching zip face downwards to the top of the purse turned inside out.*

4. *Purse turned through with end of zip protruding.* 5. *The zip tab.*

Barbara Firth

<div style="margin-left:auto">Peter Heinz</div>

<div>Dick Miller</div>

Jewelry wallet

The wallet is made from apricot suede and is lined and trimmed with cream suede. Size: open—25cm x 34cm (10"x 13½"); closed—14cm x 25cm (5½"x10").

You will need:

Piece of clothing suede at least 25cm x 34cm (10"x13½"), plus strip 68cm (27") long for cutting thongs and tie, in apricot.

Piece of clothing suede, at least 25cm x 70cm (10"x28"), in cream.

Piece of collar canvas 25cm x 34cm (10"x13½").

Latex adhesive, such as Copydex.

Small hammer, the head padded with cotton wool and covered with calico.

Piece of cardboard and tracing paper 10cm x 4.5cm (4"x1¾").

Leather punch.

Leather scissors or dressmaking shears.

Pinking shears.

Pencil or ballpoint pen and ruler.

☐ Cut out a piece of apricot suede (wallet) and a piece of cream suede (lining) 25cm x 34cm (10"x13½").

☐ Cut a strip of apricot suede 1.5cm x 68cm (½"x27") for tie and cut sufficient 3mm (⅛") thongs to attach pockets.

☐ Cut a strip of cream suede 25cm x 4.5cm (10"x1¾") for trim, a strip 17.5cm x 2cm (7"x¾") for ring band, and a strip approximately 5cm x 6mm (2"x¼"), for loop.

☐ Using pinking shears cut out pockets and flap following fig.6.

☐ Fold about 1cm (⅜") at the top of pockets and flap to the wrong side and stick and hammer turnings gently.

☐ Apply adhesive to wrong side on the outside edge of each pocket and top edge of flap.

☐ Position carefully on right side of cream suede lining. Punch holes just big enough to take thonging through all thicknesses as shown in the photograph and thread thonging through so that ends are on the wrong side. Stick ends down.

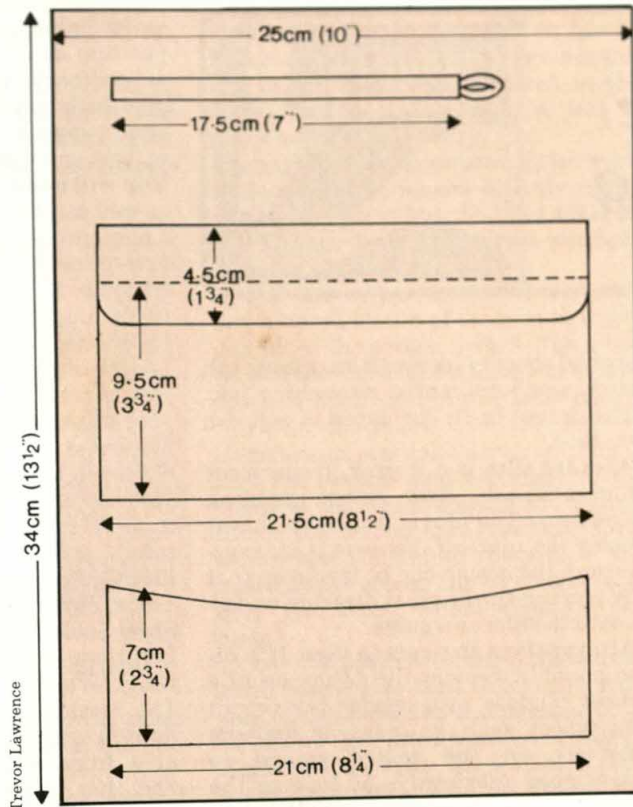☐ Stick loop centrally to wrong side of one end of ring band.

☐ Fold long edges of band to centre of wrong side and stick (fig.7).

☐ Apply adhesive to end without loop and attach to cream suede lining, punch holes and insert thonging as in photograph.

☐ Make toggle by lightly rolling a strip of suede about 2cm x 10cm (¾"x 4"), shaped at one end. Glue down the end. Punch hole in the toggle (fig.8). Then cut a piece of cream thonging approximately 6.5cm x 3mm (2½"x⅛")

This jewelry wallet, decorated with a scalloped trim, folds into three and is tied with a strip of suede. The band at the top is for rings and fastens with a toggle at one end. There are pockets for necklaces and bracelets.

6. *Cutting guide for the suede lining, pockets, pocket flap and ring band. Also a guide to the positioning of the pockets and ring band.*

25cm (10")

17·5cm (7")

4·5cm (1¾")

9·5cm (3¾")

21·5cm (8½")

7cm (2¾")

21cm (8¼")

34cm (13½")

Trevor Lawrence

and thread this through toggle so that both ends are even.
□ Punch a hole in the cream suede lining and thread ends of thong through and secure on wrong side with adhesive.
□ Make cardboard template for decorative trim from trace pattern (fig.9).
□ Place template on wrong side of strip to be used for trim. Mark scallops and holes with pencil or ballpoint pen. Move template along strip until whole length is marked out.
□ Punch out design and cut out scallops, but do not pink yet.
□ Stick trim to right side of one short end of apricot suede wallet piece.
□ Make two slits for tie 2cm (¾") apart with the first 12.5cm (5") from the outer edge of the trimmed end.
□ Thread tie through slits (fig.10) and stick to wrong side.
□ Cut a piece of cream suede with pinking shears large enough to cover slits. Stick in place on right side, punch holes through both thicknesses and thong (fig.11).
□ Stick canvas to wrong side of cream suede lining.
□ Stick wallet and lining together, with wrong sides facing, applying adhesive to the edges only (1.5cm (½") on three untrimmed edges and 2.5cm (1") approximately along trimmed edge).
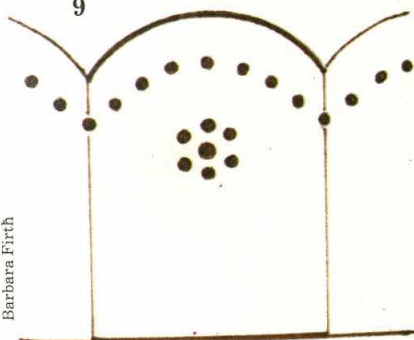□ Trim scallops with pinking shears.

7. *The long edges of the ring band folded to centre and the loop attached centrally to one end with adhesive.*
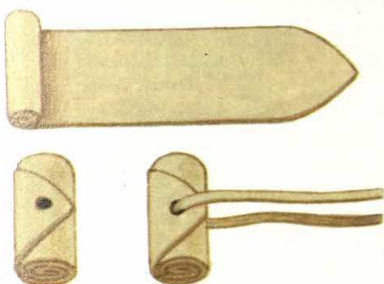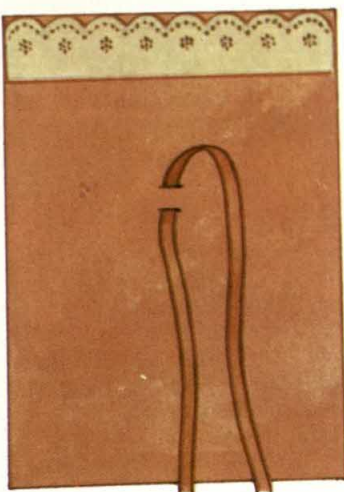

8. *Roll up suede strip to make toggle, punch a hole and thread with thonging.*

Barbara Firth

9. *Trace pattern for card template.*

10. *Scallop trim attached to one end and long tie threaded through slits.*

Dick Miller

11. *Small suede piece placed over slit.*

Dick Miller

Various ways of decorating suede with punched holes, scallops and pinking.

1087

Photographic screen printing

Photographic stencils are the most versatile and sophisticated of screen printing stencils. A photographic stencil is one in which the image is *developed* on light-sensitive material instead of cut out or painted on mesh in the traditional way.

Professional screen printers always use stencils which are made photographically but while they rely on complex laboratory equipment the process can also be done at home using ordinary household equipment and special, light-sensitive emulsion available from screen printing suppliers.

The basic process

Basically, photographic stencils are made by coating the screen with light-sensitive emulsion.

The design is laid on the coated screen and the screen is then exposed to strong light. The light causes the emulsion to harden in the areas which are not blocked by the design. When the screen is washed in cold water the emulsion comes off the areas where it has not hardened, leaving the mesh free and making a stencil for printing.

Photographic screens

Photographic stencils are the most efficient means of making complicated stencils with fine detail. They also have the advantage of being a direct method rather like tusche (Printing chapter 16, page 1052) since the image itself goes on the screen and not just its outline. Furthermore, all sorts of flat objects such as feathers, leaves, or lace which have interesting shapes can be used as designs simply by laying them on the coated screen and exposing it to light. The process sounds difficult because it appears technical, yet it is remarkably straightforward and is highly recommended, particularly for doing a lot of printing. It means you can print not only materials for personal use but original designs for fabrics or wallpaper for sale.

Designing for photographic screens. It is very important when making photographic stencils that the design is completely opaque so that no light will penetrate it and cause the emulsion beneath to harden. For this reason most designs are painted on a special sheet of film with an opaque ink such as photographic retouching ink. The design to be developed is called a *positive*.

Acetate film is a frosted, translucent film available from screen printing suppliers. The film is frosted so that it holds the ink and, because it is translucent, the design can be traced on to it by placing the original drawing underneath the film as a guide.

Alternatives to acetate film. It is also possible to paint the design on to a sheet of glass with opaque ink or put an object such as grass or feathers directly on the coated screen as mentioned previously. As long as the design image is opaque it will act to protect areas of the screen from hardening and so make a stencil.

Multi-coloured designs. Remember when transferring your design on to acetate or glass that only those areas which are the same colour go on the same stencil. If your design has more than one colour you must prepare a separate positive for each.

Materials

Light-sensitive emulsion is the key ingredient in photographic stencil making. This is made of *potassium dichromate* and is best bought already suspended in a gelatin base (otherwise the two must be applied separately to the screen). Exposure to direct, ordinary light makes the emulsion harden and become insoluble so that it cannot be washed off. Some emulsions come in two parts. A 'medium' (solution in which the photo-sensitive agent is suspended) and the photo-sensitive agent itself. When mixed the solution can be kept a day or two in a dark bottle in a cool place.

In addition to liquid emulsions there are photo-film stencils on the market which consist of clear film already coated with emulsion. This type of stencil is not waterproof however and so not suitable for use with fabric dyes or water-based printing inks.

Ultra-violet exposures. Some photosensitive emulsions are designed for exposure under arc lights or special ultra-violet lights and these are not suitable for home use unless you buy special lighting equipment. Ultra-violet lights are available from screen printing suppliers. Do not try to use an ordinary 'suntan' lamp as it will give little success. Always make sure your supplier understands what type of light you will be using.

You will need the following equipment as well as your printing screen to make a photographic stencil at home.

Frosted acetate film such as Kodatrace. Opaque ink such as photographic retouching ink.

Light-sensitive emulsion.

Length of L-shaped aluminium channel just shorter than the inner width of your printing screen.

Masking tape.

Sheet of clear glass at least as large as your screen.

A board that will fit easily inside your screen.

Piece of old blanket.

Thick, dark cloth.

Sheet of black paper for testing.

Light source.

Clock. Weights.

The acetate film, retouching ink and light-sensitive emulsion are all available from screen printing suppliers and the retouching ink can also be bought from some art suppliers and from photographic supply houses. Other types of ink can be used so long as they are completely opaque which many inks, such as Indian ink, are not.

Making a trough. The L-shaped aluminium channel must be assembled to hold the emulsion and this is done by filing off any sharp edges on the ends and building up a wall at each end with strips of masking tape (fig.1).
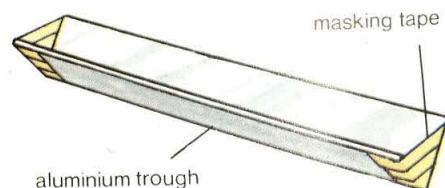

1. *Improvised trough for emulsion.*

Coating the screen

Make sure your screen is thoroughly de-greased and dust free before you begin. A washing with detergent and hot water is advisable. When your positive (design image) has been prepared you are ready to coat the screen with the emulsion. Work in subdued light such as a room with the blinds drawn.

Test strip. Before you coat the entire screen a test strip should be made to find out the right exposure time for the circumstances. This is done by coating a small section at the bottom of the screen just as you would coat the whole screen (described below) and then exposing this area for different lengths of time as described further on. This need

not interfere with the use of the screen later.

Coating process. Lean the screen up against the wall with the short side horizontal and the outside of the screen facing you (fig.2). Put newspapers beneath it.

Paul Williams
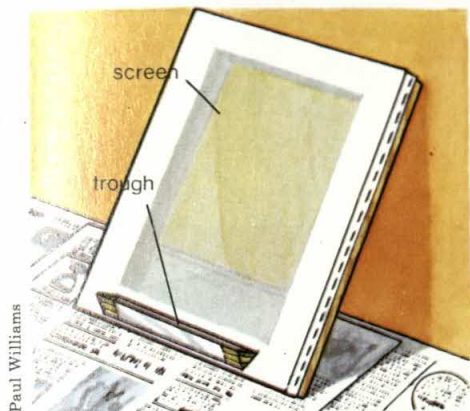
2. Coating the screen with emulsion.

Fill the aluminium trough with emulsion and begin the coating at the bottom of the screen.

Press the edge of the trough against the mesh and, inclining it slightly towards the screen, slide it upwards about 5cm (2″) for a test strip and to the top of the screen when preparing for a printing stencil.

Applying the emulsion this way is a knack. You should press the trough quite firmly against the mesh as you slide it upwards, otherwise lots of air bubbles form which later burst and turn into pinholes. Deposit as even a layer of the gum-like emulsion as you can. (Practise the motion first with the trough empty.)

Then turn the screen round and coat the inside too. Allow emulsion to dry.

Pinholes. When the screen is thoroughly dry (and this may take several hours) check it for pinholes by holding it up to the light. If there are only one or two these can be 'spotted' with a brush dipped in emulsion. Wash the brush with water to clean. If there are large numbers of pinholes your coating technique is at fault; coat the screen again.

Making the exposure

Photo-sensitive emulsion can be exposed by an ordinary light bulb, fluorescent light or direct sunlight.

Light intensity. Direct sunlight should develop the emulsion in five to ten minutes while several fluorescent 40 watt bulbs can be even faster if placed about 20cm (8″) from the screen and one bulb put about every 15cm (6″) apart over the screen. A 500 watt bulb placed about 45cm (18″) from the screen will develop in about the same time as sunlight, while a 150 watt

bulb will take at least three hours. However, all these facts vary according to the basic light content in the room and for this reason a test is important and necessary.

Preparing for exposure. Your work table should be placed directly under the light source, but the light must be off. If your source is direct sunlight keep the blinds drawn.

☐ Put one or two books on the table and a board on top of them so that you can place the screen over it like a box lid and the sides of the screen can hang down without touching the table (fig.3).

☐ Cover the board with the piece of blanket and place the screen on top of it in the manner just described. If the edges of the blanket make too tight a fit for the screen then you may have to cut the blanket to the size of the board so the screen can fit comfortably over the board which supports the mesh.

☐ Lay the positive on top of the screen mesh. Remember that this is the print side of the screen so the positive must be placed face downward so it will be right way up when the screen is used for printing, otherwise the design will come out back to front.

☐ Lay the sheet of glass on top of the positive (unless the positive is painted on glass, or is too bulky). It is a good idea to put some weights on the corners of the glass as good contact between

the positive and the screen is essential. Fig. 3 shows the layers which are then completely covered by a dark cloth.
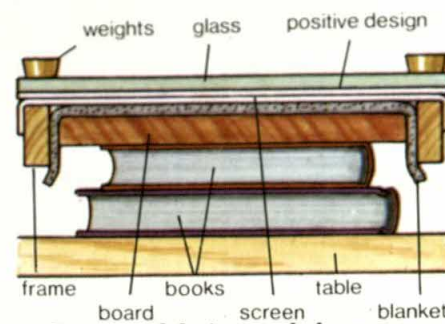
3. Screen and design ready for exposure.

Exposing a test strip. To make a test of exposure time for the particular environment and light you are using prepare the screen as described but use for your positive on the coated test strip a zigzag design which will cover the test strip from top to bottom (fig.4).
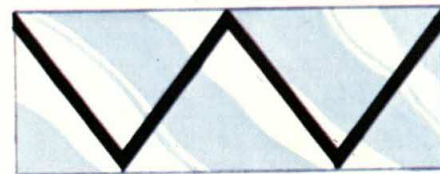
4. Test strip to measure exposure time.

Steve Bicknell

Screen printed T-shirt was decorated by Janet Allen using a photographic stencil.

☐ Have the sheet of black paper in your hand. Expose the test strip to light for two minutes. Then cover one quarter of the strip with the black paper so that three-quarters remains exposed for another two minutes.

☐ Then slide the black paper along so that half the strip is covered and expose the remaining half for another four minutes.

☐ Slide the paper up leaving only the last quarter of the strip exposed and leave this under the light for a further eight minutes. This means that the quarters will have been exposed for two minutes, four minutes, eight minutes and 16 minutes respectively.

☐ Remove the glass and the positive.

☐ Take the screen to the sink and run cold water over both sides. Do not rub. (A short length of hosepipe or a hair-washing spray is useful for washing the screen.)

Normally the parts of the screen that have been protected from the light will wash away leaving open mesh in those places but the areas of the test strip will vary and reveal which exposure time is best. On the over-exposed areas the image may not wash out at all, while in the very under-exposed areas everything may wash out.

To expose the whole screen for printing proceed as for the test strip but expose the screen only for the amount of time that proved suitable in your test. (The screen may, after washing, be blown dry with a hair-dryer.) Then apply gum strip to the edges and the screen is ready to print, using either oil- or water-based inks and dye.

Laboratory stencils

Positives may also be made by preparing a design in black and white on paper (each colour in the design is shown on a separate sheet) and getting it photographed and printed on to transparent film as a positive. Most screen printing suppliers provide this service.

The advantages of this method are that the artwork (as your drawing is called) may be easily enlarged or reduced. Also, if you are making a screen full of a tiny repeat pattern, such as minute flowers or other images that require painstaking labour to paint over and over again, it can save you hours of work. One repeat unit can be quickly multiplied by photographing several positives on film and these can be assembled to cover the whole screen.

When making photographic repeats be sure to make two repeat crosses in the margins of your artwork as described in Printing chapter 13, page 962. This is invaluable for assembling all the repeat units side by side on the screen and when this is done the crosses can be scratched off the film with a sharp blade.

Strawberries

The strawberry fabric was made using a photographic laboratory to multiply the repeat unit. One complete repeat unit—a rectangle filled with the strawberries as shown—was drawn up as two sheets of artwork, one for each colour. Each was photographed and a number of photographic positives on film were printed. These were then assembled to cover the surface of two screens (one for each colour).

The design could also be made by painting in every single strawberry until the screen is covered. Or you could mask out all the screen, except one strawberry and use this one unit to print motifs on small items such as napkins.

Right: shoulderbag made from screen printed fabric by Janet Allen.

Below: the repeat unit for strawberry fabric enclosed in a rectangle for repeat printing. Several repeat units could be combined photographically in a lab or one made using home photographic stencil techniques.

Melvin Grey
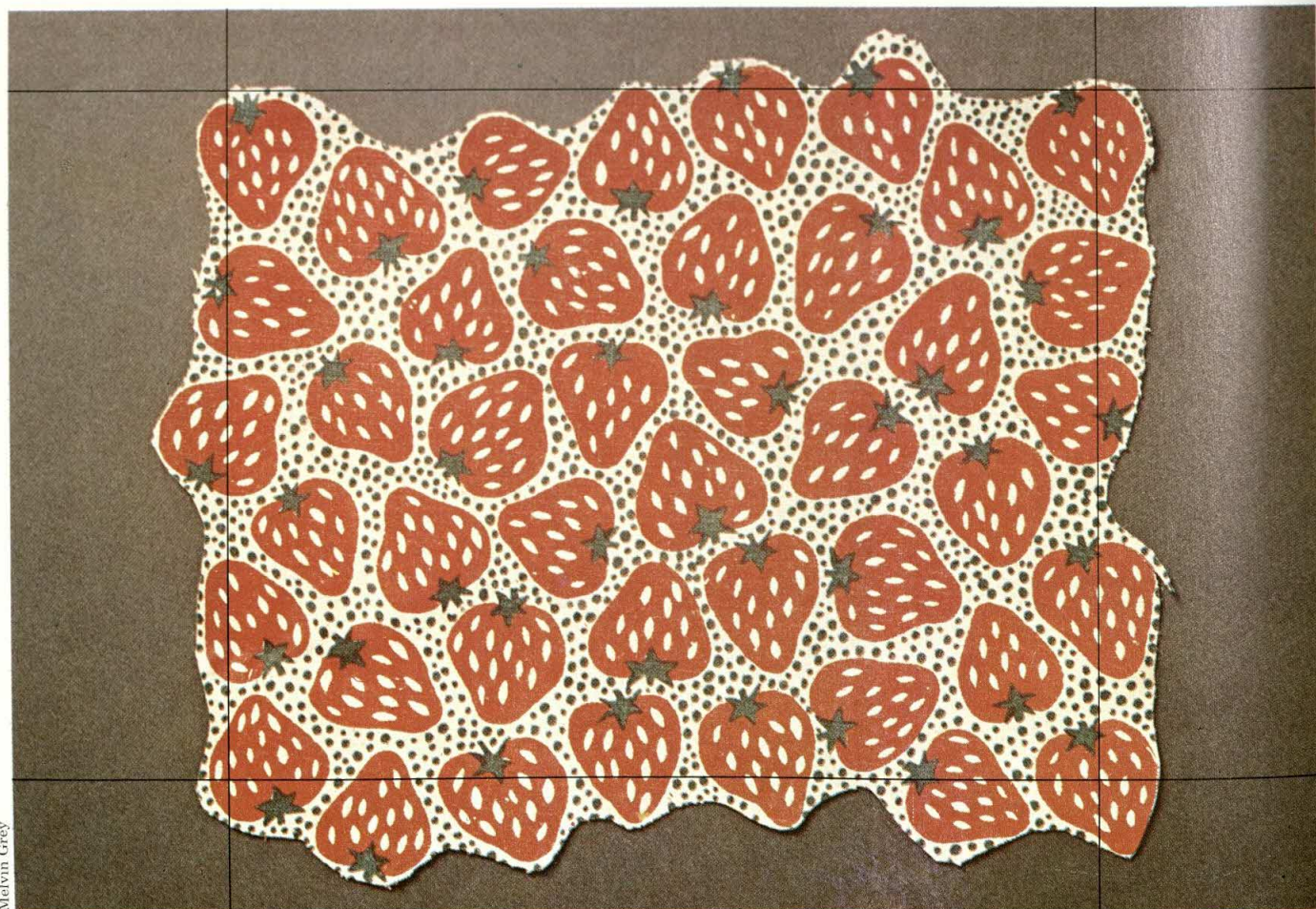
Various ways to hang pictures

When displaying your craft work a great variety of group displays becomes possible, and some of these were shown in the last chapter. But there are even more possibilities of display grouping as illustrated here.

In all cases try out various compositions on the floor before starting to hammer picture pins into the wall.

Coat-hanger (fig.1) is a variation of a straight line grouping except that, in this case, the objects are 'hung' from an imaginary line as if they were being supported by a coat-hanger. The central object is a little larger and placed slightly above the others which are equally balanced on either side.

Block grouping (fig.2) works best on a square or rectangular basis where the objects are placed fairly close together for maximum effect. This grouping may become a little overpowering so keep the total area small; it can be very effective where the objects are small and the same size.

Diagonal. If you are trying to combine pictures of all sorts and sizes in one group, eg about a table or a sofa, it often helps to build a diagonal first, then fill in the triangles on either side. The main weight may be at the top of the composition (3a) or at the bottom (3b).

Golden section (fig.4) is based on the harmonious 3:5 proportion (Design know-how chapter 34, page 952), and can be used to advantage in grouping. You will need one largish picture or hanging for this display.

Circular grouping (fig.5) can be an attractive and pleasing way of showing off your work. Either fill the centre of the circle with an interesting larger object or leave it empty. Remember to leave a space around the circle; don't overcrowd the surroundings.

Triangular grouping (fig.6) can be either a very solid, stable triangle resting on its base, or a triangle with its apex at the bottom and fanning out to a broad top. Of course the sides of the triangle do not need to be the same length. Vary the shape according to the amount and the shape of space that you have to fill.
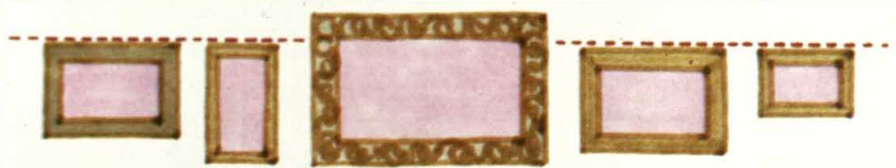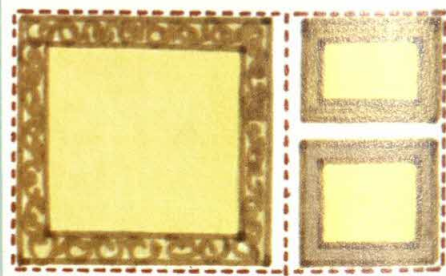
1. *If a straight line group seems a little flat, try a coat-hanger formation.*
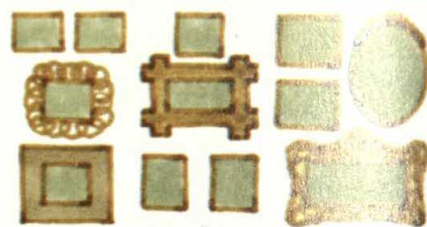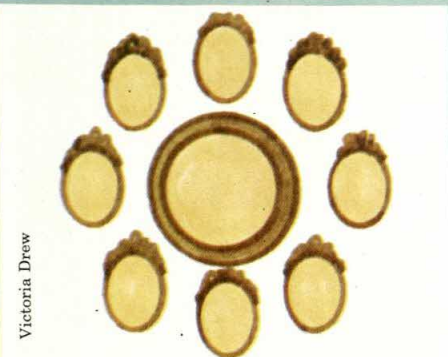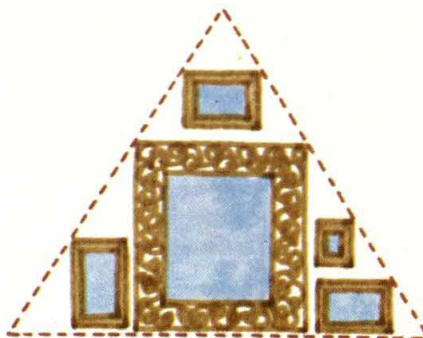
2. *Even, rectangular block group.*
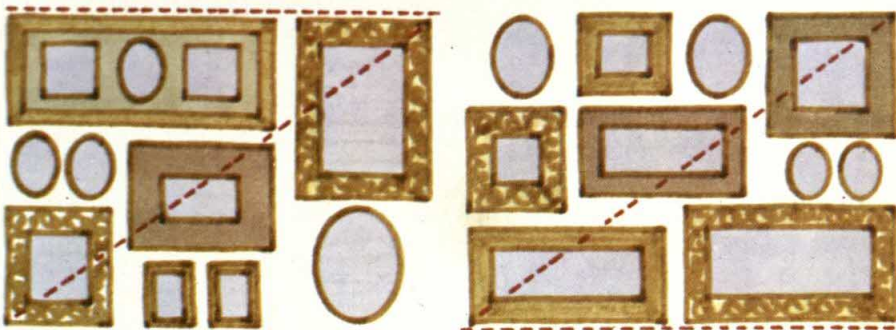
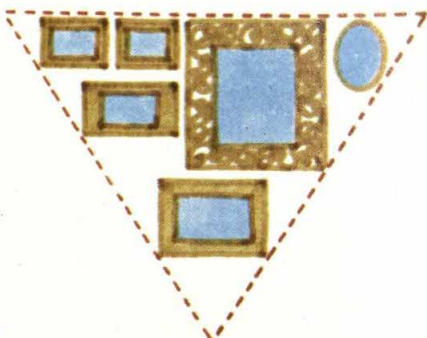3a, b. *Different sizes and shapes may look best based on a diagonal.*

4. *A simple 3:5 proportionate group.*

Victoria Drew

5. *Circular: usually works best with rounded pictures and frames.*

6. *Triangular: stable but with more movement than block grouping and suitable for a variety of picture sizes; this grouping can fit most wall spaces.*

Creative ideas 39

Ways of display

When you think of hanging something on a wall is it always a picture suspended from a nail? Think again—what can be displayed on a wall, and what are the ways and reasons for hanging anything on a wall?

Display. Here a collection of antique serving platters and dishes bring drama to a bathroom. They are suited to the damp atmosphere that might damage paintings or prints and their blue and white motifs have influenced the overall décor.

Ease of use. If you have the wall space it can be a good idea to remove kitchen utensils from a jumbled mess in a drawer or the furthest reaches of a cupboard and hang them in plain view as shown here. And don't think they need to be brand new—remember they are there to be used. To ensure that each utensil is returned to its proper place its silhouette has been painted on the wall behind.

Methods of hanging are many but the most suitable for heavy dishes are spring plate wires. These are a system of two wires the ends of which are bent to grasp the edges of the plate with two springs between the wires to provide the necessary gripping tension (fig. 1).

A collection of dishes makes an eye-catching display.

Kitchen utensils ready to use, backed by silhouettes.
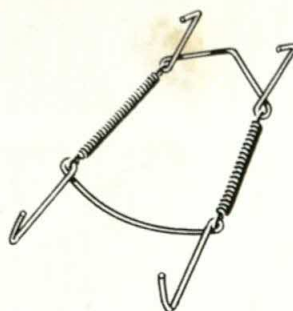
1. *A spring plate wire.*

Hang these from double-x picture hangers which come with special pins for fixing to plaster walls.

Small dishes can be hung by using adhesive plate hangers. These are fabric discs made with an animal glue adhesive back which must be moistened and applied following manufacturer's instructions exactly. Hang these from single-x picture hangers.

Cup hooks as well as simple nails are an obvious choice for kitchen utensils.

It is advisable to attach wooden battens to a plaster or brick wall with Rawlplugs and screws, then work out a pleasing and practical arrangement for the utensils. Don't put things you use most at the very top and try to keep a balance between large and small objects. Fix nails and hooks in position on the battens. For hanging wooden spoons and rolling pins, screw eyes can be screwed into the tip of the handles.

Jessica Strang

Trevor Lawrence

Attractive rag doll to make

This chapter gives patterns and instructions for a rag doll to delight any little girl—you will enjoy making it too. In the next chapter are patterns and instructions for making her outfit.

Doll's body

Pattern pieces overleaf.
The finished doll is 60cm (24″) high.

You will need:
70cm (¾yd) calico, 90cm (36″) wide.
25gm (1oz) ball light brown double knitting wool for hair.
15cm (6″) square brown and black felt.
Scraps of pink and white felt.
Pink and brown embroidery thread.
Matching thread.
230gm (8oz) kapok.
2 tiny red buttons for shoe straps.
Tracing paper and pencil.

Note: seam allowance of 1cm (⅜″) included on the pattern unless otherwise stated.

☐ Trace off all pattern pieces and, in calico, cut one head front, two head backs, two body sections, and cut two legs and two arms on the fold. Cut all pieces on the straight of grain. Mark point and top of dart with single tailor's tacks.

☐ Cut four shoe uppers in black felt, two soles and two eye centres in brown felt, two eye whites in white felt and a mouth in pink felt.

☐ With right sides facing, tack and stitch head back sections from A to B. Trim seam, clip curve and press open.

☐ With right sides facing, tack and stitch the dart in head front. Press dart to one side.

☐ Tack and stitch head front to head back, with right sides together and matching dart to centre back seam, easing where necessary. Trim seam and turn head through to right side.

☐ Fill firmly and oversew raw neck edges together.

☐ To make hair: loop wool backwards and forwards across head, back stitching to head along line of dart and down centre back seam. Start stitching on face 2.5cm (1″) below seam line (fig.1) and continue to 4cm (1½″) above neck edge at back.

☐ At the back of the head pull strands evenly across head and back stitch to side seam at each side, beginning 2.5cm (1″) above neck edge and finish 4cm (1½″) from centre line of back stitch (fig.2). Tie hair and trim ends.

☐ With right sides facing, tack and stitch one arm on the stitching line. Trim, clip into angle of thumb and turn through to right side.

A. *Finished doll, undressed.* B. *Doll's face (hair can be plaited if preferred).* C. *Shoe with strap.* D. *Lines for fingers machine stitched.* E. *Hair back stitched to centre back seam.* F. *The clothed doll. Designed by Rosemary Hoar.*

□ Lightly fill the hand and machine stitch lines for fingers.

□ Fill arm firmly to within 2.5cm (1″) of the top. Machine stitch across the tops 1cm (⅜″) from the raw edge.

□ Repeat with the other arm.

□ Place two body sections with right sides together and place one arm between them. Match raw edges and points C. Tack and stitch the side seam from C to bottom (fig.3).

□ Repeat with the other arm.

□ Stitch shoulder seams. Turn through to right side.

□ Turn in raw neck edge on body and insert head about 1.3cm (½″) into opening, matching side seams on head to shoulder seams on body. Tack and then oversew the body firmly to the head (fig.4).

□ Fill body firmly to within 4cm (1½″) of lower edge. Turn in 1cm (⅜″) along lower raw edge and tack temporarily to close.

□ With right sides together, stitch back seam of one pair of shoe uppers 6mm (¼″) from the edge. Press seam open and trim it at top.

□ With right sides up, place top edge of upper over bottom edge of one leg, overlapping by 1.3cm (½″). Tack and topstitch by hand or machine 3mm (⅛″) from edge of upper (fig.5). (You may have to stretch felt slightly.)

□ With right sides together stitch leg and front seam of shoe as one. Trim seam, clip curve on leg and turn through to right side.

□ Back stitch sole to shoe upper 3mm (⅛″) from the edge, leaving one side open to enable filling to be pushed into the leg from the foot as well as from the top of the leg.

□ Fill leg firmly to within 2.5cm (1″) of the top, pushing filling down from the top with a knitting needle if necessary.

□ Back stitch sole opening and machine stitch across top of leg with seam at centre front, stitching 1cm (⅜″) from the raw edge.

□ Work two rows of machine stitching along the length of one shoe strap and oversew to shoe. Stitch a button at outer end of strap.

□ Make up the other leg in the same way.

□ Remove tacking from lower edge of body. Insert legs into body opening, so that raw edges are about 1.3cm (½″) inside the body.

□ Tack and back stitch across lower edge of body with two rows of stitching, one close to the edge and the other about 1.3cm (½″) up from the edge (fig.6).
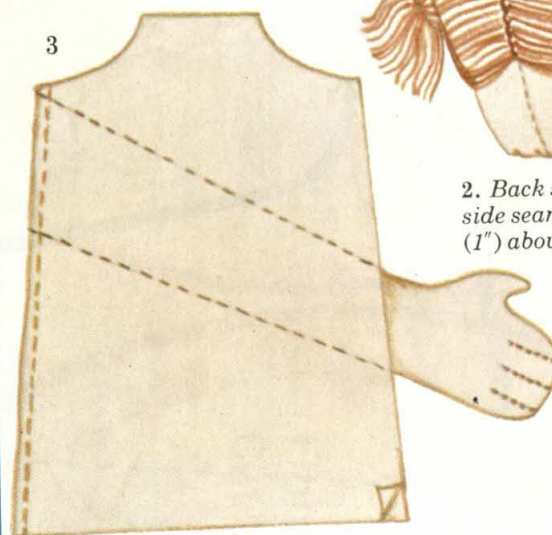
□ Stitch centre of eye to white (fig.7).
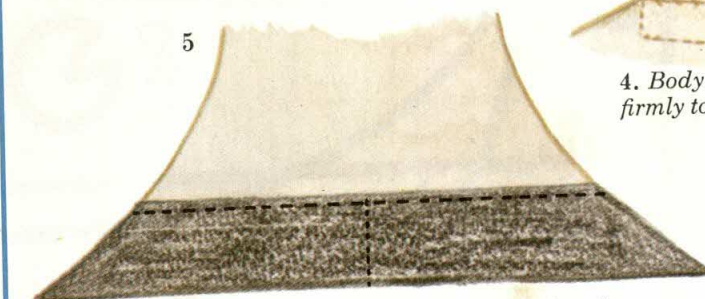
□ Arrange eyes and mouth on face.

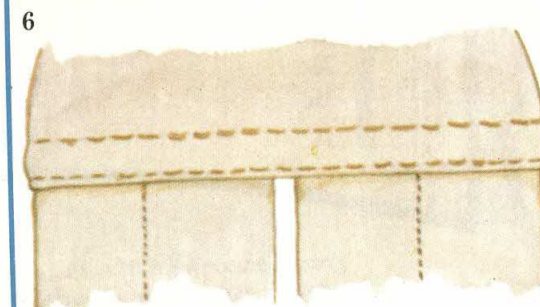□ Sew eyes and mouth to face. Embroider eyebrows and nostrils and then 'stars' for cheeks.
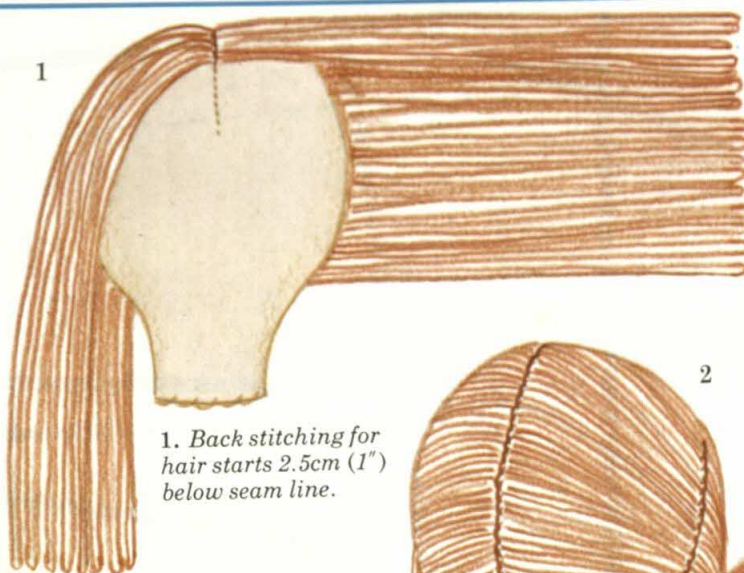
1. *Back stitching for hair starts 2.5cm (1″) below seam line.*

2. *Back stitching on side seam starts 2.5cm (1″) above neck edge.*

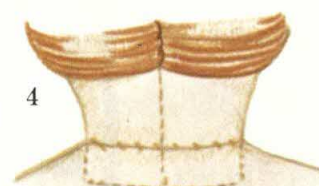3. *Arm stitched in between two body pieces.*

4. *Body oversewn firmly to head.*

5. *Shoe upper top stitched to leg 3mm (⅛″) from the edge.*

6. *Legs inserted into body and then stitched.*
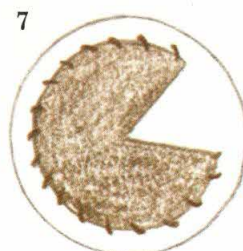
7. *Assembling the eye.*

Leslie Fox

Centre White

⟳ ◯ Eye

▭ Mouth
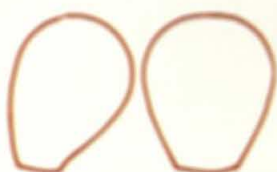
Head

Body

Shoe upper back
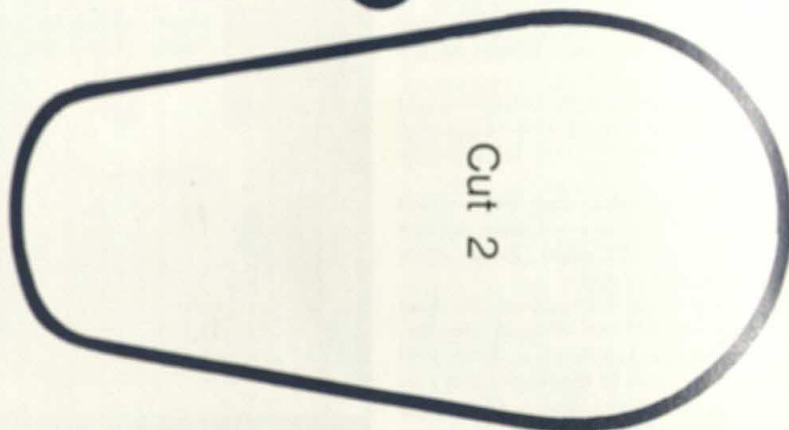
Sole

Strap

Arm

Leg

1096

Cut 2

Cut 2

Cut 2

C

C
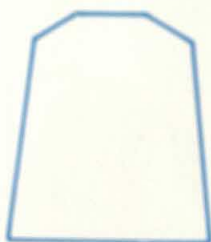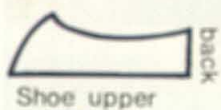
Cut 2

Cut 2
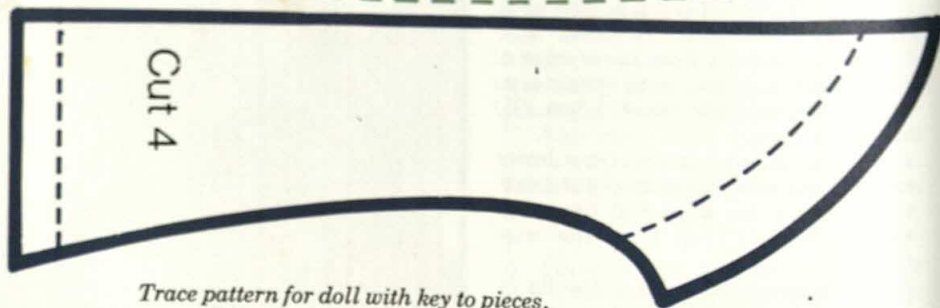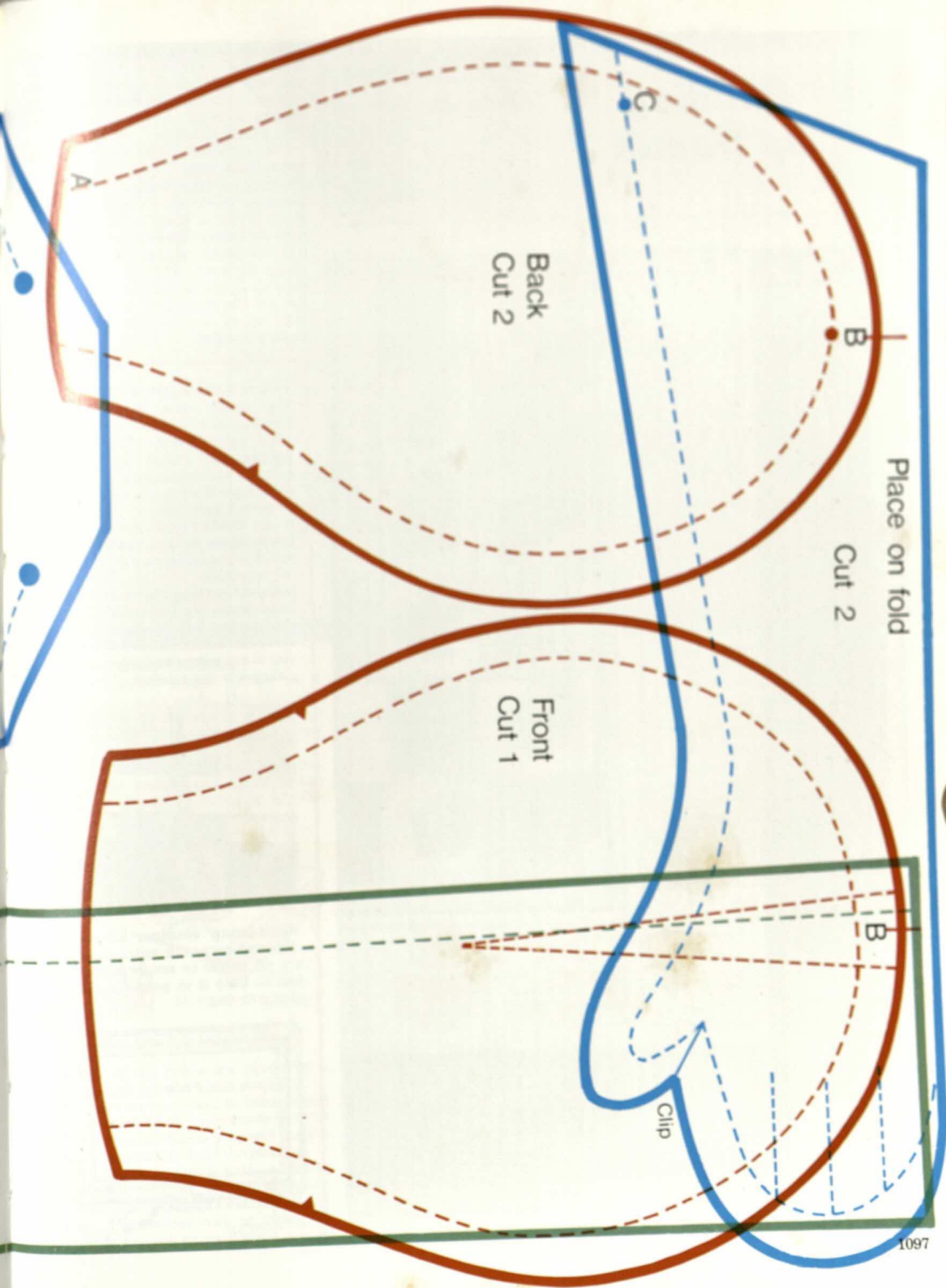
Cut 2

Cut 1

Cut 2

Cut 4

*Trace pattern for doll with key to pieces,
seam allowances are included.*
— — — indicates stitching line.

Place on fold

A

Back
Cut 2

C

B

Place on fold

Cut 2

Front
Cut 1

B

Clip

1097

Building up frames

The advantage of doing your own framing is not only that it is cheap, but also the fact that a frame can be especially designed to suit a particular picture or object such as a tapestry. The frame, therefore, not only shows off the picture but also blends with its surrounding area.

Building up 'deep' frames to take relief pictures, such as collages or dried flower pictures, is not difficult but does need patience and a bit more work than a simple frame constructed out of four pieces of wood. The method of construction is always the same even though the completed frame may be built up of a series of frames, one inside the other.

Tools and equipment

The usual tools required for framing are a saw and mitre box, or a bench hook adapted for cutting mitre joints. For details of tools and equipment required for simple frames see Carpentry chapter 3, page 158.

If you want to make a number of frames there are two useful items which make things easier, but are not essential.

A metal cutting block such as a Jointmaster is a useful addition to a workshop. It functions as a versatile bench hook allowing you to cut mitres and other joints accurately any number of times.

Mitre snap clamps, alligator clips and corner or mitre clamps are all useful to secure a frame and to keep it in position while glue is drying.

frame

mitre clamps   cord
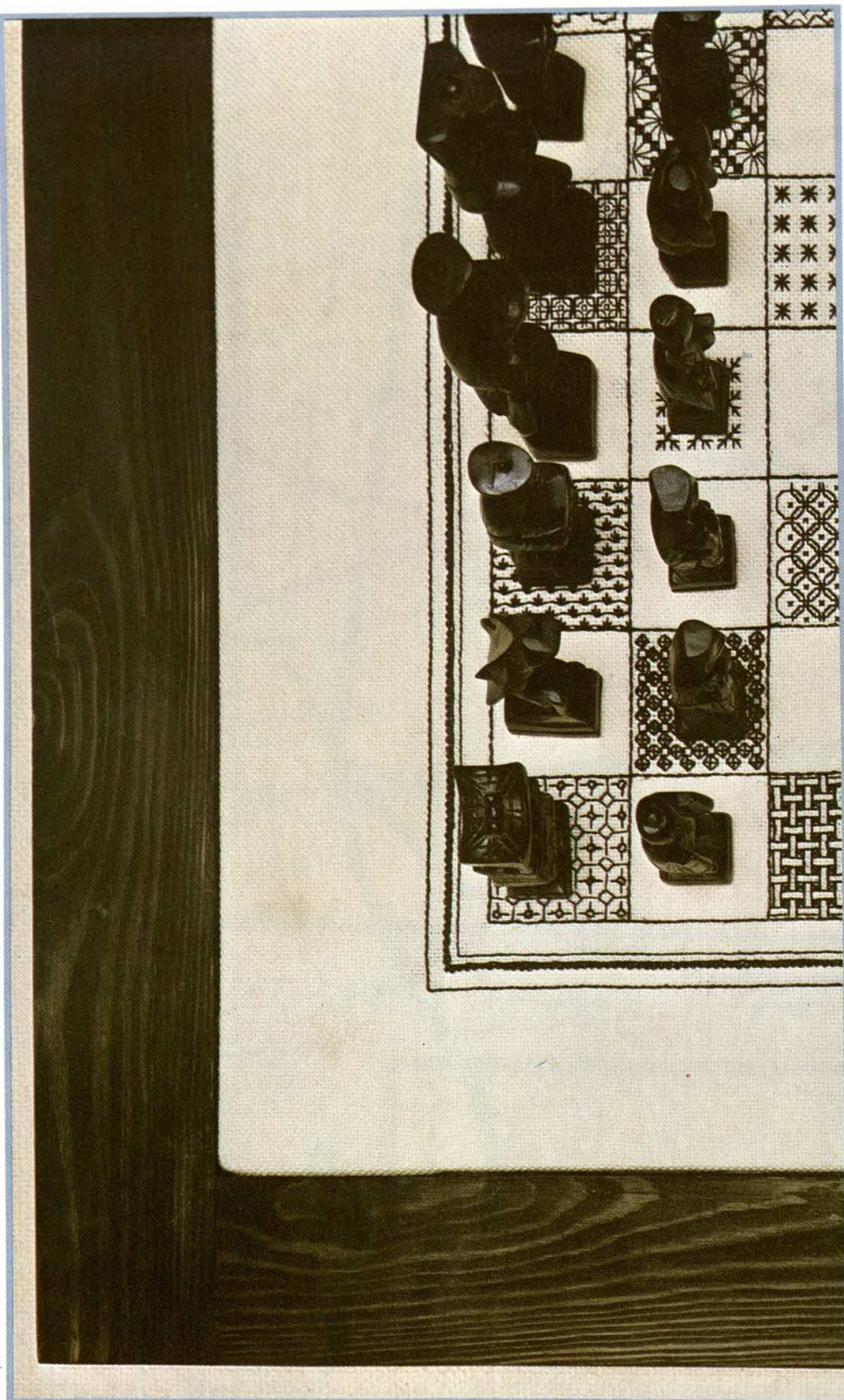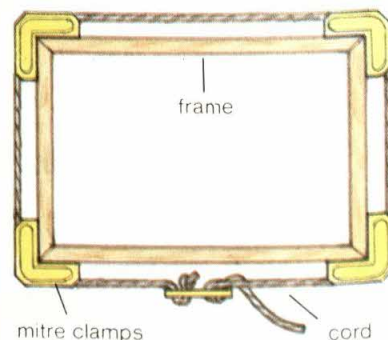
Butt jointed frame made by nailing four pieces of wood together.
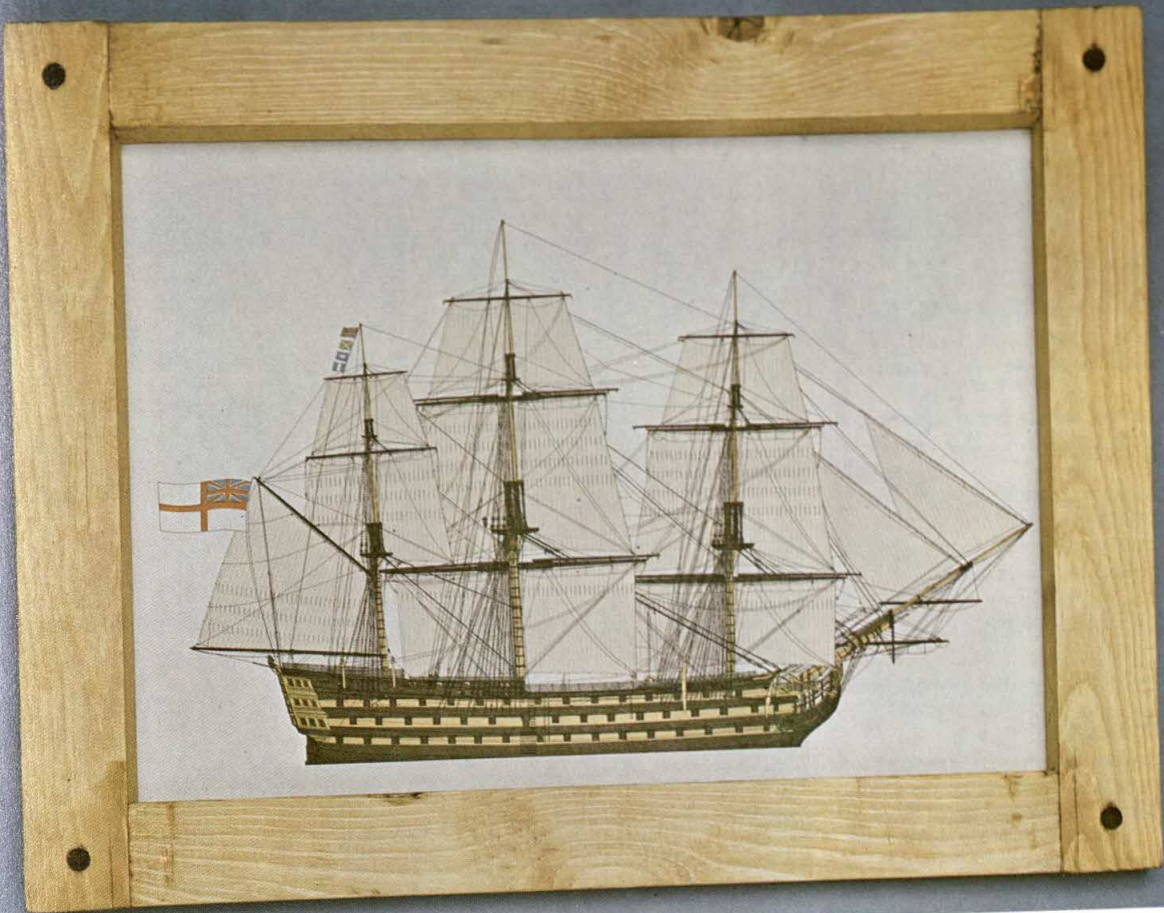
Peter Heinz

Peter Heinz

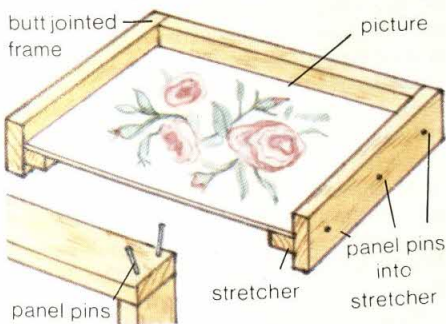## Butt jointed frames

A butt jointed frame known as a baguette is easily made. This is a very useful way to frame a picture or tapestry which is already on a stretcher and which does not require glass.

Four strips of wood are simply put around the picture and nailed to the stretcher (fig.1). The nails at the

1. *Frame is nailed to stretcher.*

corners of the frame are placed at a slight angle for additional strength.

If the picture you want to frame is not on a stretcher and you want to frame it in this type of frame you will need a rebate or rabbet to hold the picture. If you have a plane with a rabbet attachment you can use it to make the necessary rebate before assembling the frame. The easiest way to make the rebate is to glue or nail small square

sections of wood or beading to the back to form the rebate (fig.2).

2. *Rebate formed by strip of wood.*

This type of frame is not very strong so, for a heavy picture, with or without glass, the frame can be strengthened by using a halving joint.

A halving joint can also be used to make a frame, similar in appearance to a butt jointed frame, but much stronger (Carpentry chapter 14, page 972). The frame is glued, nailed or screwed together and a strip of wood can be added to the back to form a
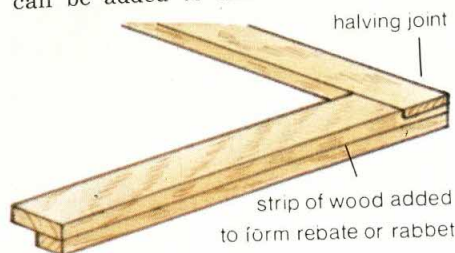
3. *Halving joint strengthens frame.*

The rustic appearance of the frame suits the subject of the picture. Bits of dowel secure the halving joints.

rebate to hold the picture (fig.3).

Another method of securing the halving joint is to use dowels instead of nails or screws. The dowels are left to show on the front of the frame and can look very attractive. The frame is made to the required size, glued and assembled.

Using a hand drill with a 6mm ($\frac{1}{4}$") bit drill one or two holes at each corner through the joint.

Plug the holes with pieces of 6mm ($\frac{1}{4}$") dowelling (fig.4). Smooth the surface with fine grade glasspaper so that the dowel ends are flush with the frame surface.

Polish or varnish as required.
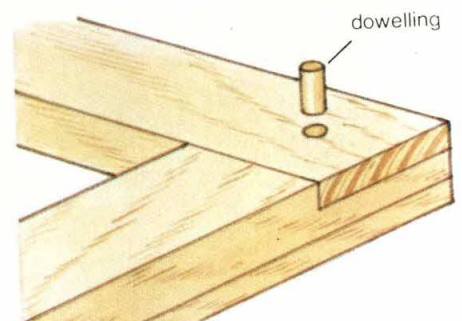
4. *Dowelling used to secure joint.*

Paul Williams

1099

General hints

Always saw on the waste side of the cutting line.

Make sure that opposite sides of the frame are exactly the same length.

Hold the moulding securely against the mitre box when sawing.

Sand edges lightly to remove rough edges and be careful not to round the ends. Always wrap the fine grade glasspaper round a block of waste wood when sanding.

Complete the frame before measuring the size of the glass required.

If slight gaps show at the joints fill them with wood filler.

Use gummed paper tape and brown paper to cover the entire back of the picture frame to prevent it from collecting dust.
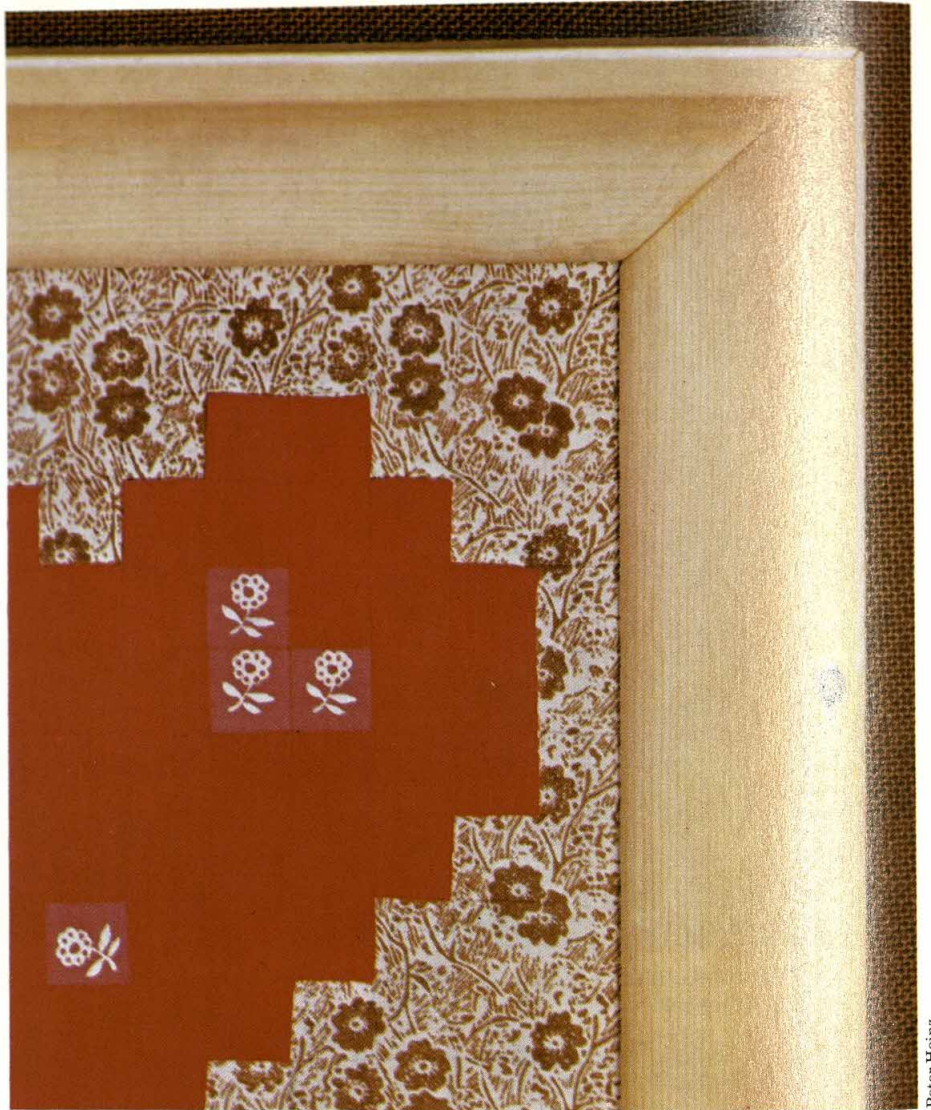
Mitred frames

There is always a certain amount of waste when cutting mitres so do allow for this when measuring and buying moulding.

Measurements

The waste for each cut is equal to the width of the moulding (fig.5). Eight cuts are made for a rectangular frame so you will need an additional length of eight times the width of the moulding, plus another width or two to allow for timber lost in cutting. This is the minimum length of moulding required. It is sensible to buy enough for an additional side piece in case you split or break a moulding when cutting.

Builder's mouldings. Picture frame moulding is available from DIY and hardware stores in various sizes and finishes. Builder's mouldings, however, are also suitable and often a lot cheaper than picture frame moulding. Builders use the moulding to finish off doors and panels, and for skirting boards around floors, and cornices. (When buying moulding make sure that it is not warped and that it is free of knots.)

Above: mitred frame made from builder's mouldings.

Builder's mouldings are flat at the back so they do not have a rebate or rabbet into which the picture, its mount and glass fit. This is easily overcome by adding a strip of wood to the back to form the rebate (fig.6). If you are experienced with a plane and have one with a rabbet attachment it can be used to make a rebate in builder's moulding.

Three-dimensional frames

These are mainly used for framing collages where the glass is not to touch the picture being framed. The frame must be constructed in such a way that the glass will be held firmly and leave enough room for the picture.

Basically, a three-dimensional frame consists of two frames—one fits inside the other. The inside frame holds the picture and the outer frame is used for the glass (fig.7). When designing a frame like this it is important that you know how far the glass must be from the picture and to use a moulding for the inner frame that will allow for this.
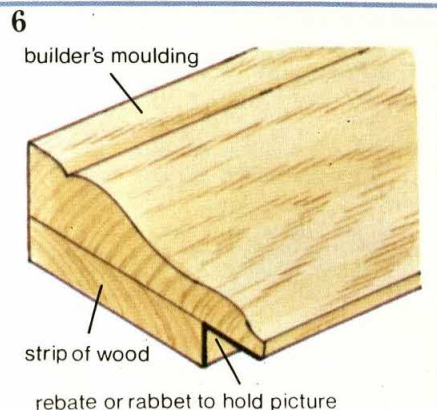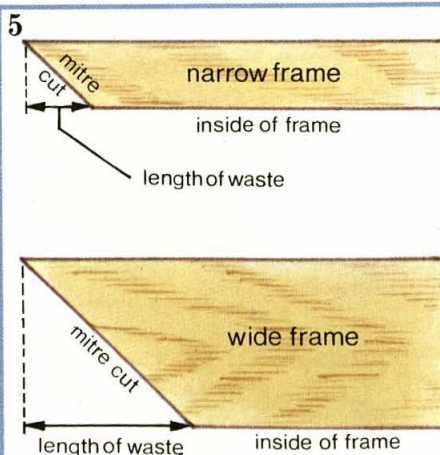
5. *Calculating waste for mitre cuts.*
6. *Strip of wood added to back of builder's moulding to form rebate.*

Peter Heinz

Paul Williams

7

outer frame made from
half-round moulding

glass

picture

inner frame
made from box
or sloping moulding
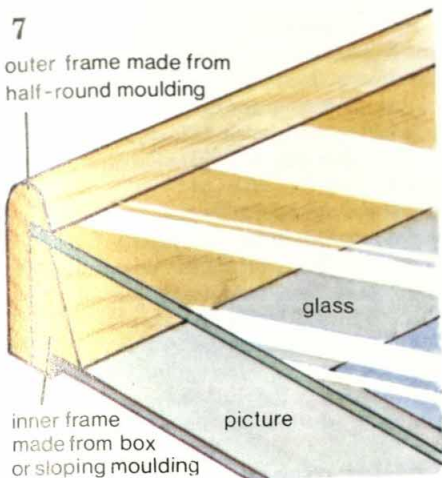
7. Frame for 3-dimensional picture.

A

B

rebate

A

B

rebate

8

mouldings for inner frame

recess
between
frames

outer frame with glass

inner frame with picture

card inserted
to keep frame in position

9

back view

builder's moulding

10

inner frame

glass

picture

strips of wood
to form rebate

The distance available is indicated between points A and B (fig.8) on the inner frame moulding.

The inside or smaller frame is constructed with mitre joints to fit around the picture.

The frame to hold the glass is made 3mm ($\frac{1}{8}$") larger to fit around the smaller frame.

Assemble the frame by placing the glass in the larger frame and the picture in the smaller frame.

Centre the smaller frame in the other frame on top of the glass and insert bits of card to keep it in position. Use glue if necessary (fig.9).
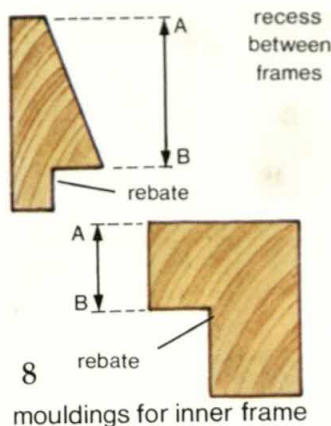
Complex frames

The moulding you want to use might not give you the necessary distance to lift the glass from the picture or you might want to use builder's moulding which has no rebate. These problems are easily overcome (fig.10). Always remember that each frame is built up individually starting with the inner frame and the measurements for the glass are taken once construction is complete but before the final assembly is done.

Make the inner frame using the builder's moulding.

Add a strip of wood to the back to form the necessary rebate. A mitre joint can be used but a butt joint is easier. As the strips cannot be seen it does not matter if the joints are not very accurate. Use wood glue to secure strips to back of moulding.

Make the outer frame in the same way but use a few panel pins to secure the moulding to the strips. This will ensure the necessary strength to support the completed frame. This outer frame is constructed slightly larger—3mm ($\frac{1}{8}$") all round—to fit round the inner frame. Once the two frames are complete the glass is cut to fit rebate of outer frame.

A complex frame constructed to lift the glass from a dried flower collage.
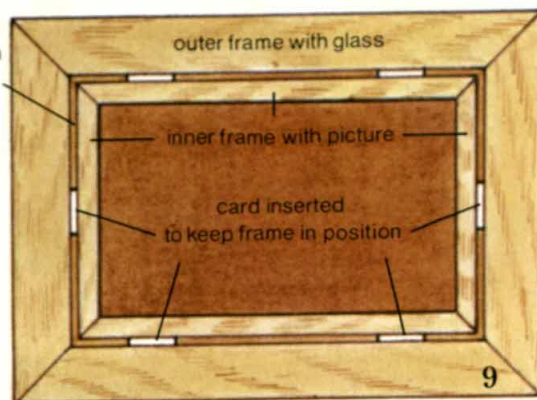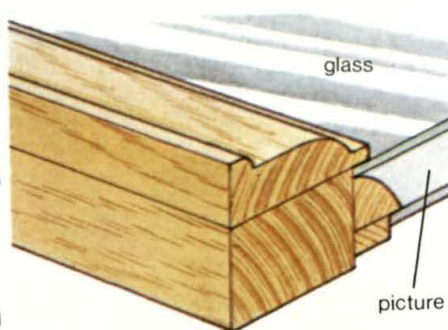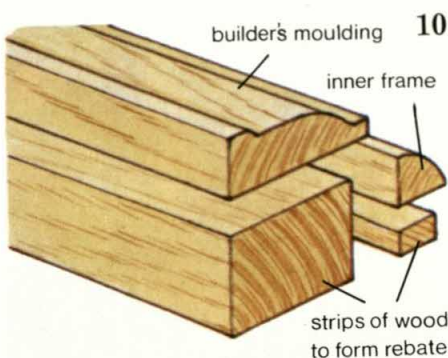
The frame is assembled in the same way as the previous three dimensional frame.

Add picture hooks and wire and the frame is complete.

Once you have got the idea of building up frames and you have actually made one, it is easy to continue and design

8. A-B on inner frame shows clearance between picture and glass.
9. Back view of inner and outer frame.
10.   Builder's   mouldings   (left) assembled (right) for complex frame.

frames using a wide combination of mouldings to suit your requirements.

Peter Heinz

Tiffany-style lampshades
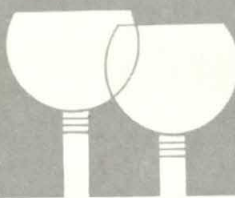
Louis Comfort Tiffany (1848-1933) was an American painter, craftsman and decorator. He produced a wide range of *objets d'art*, but he is remembered primarily for his glass and, more specifically, for his famous Tiffany lampshades.

Tiffany-type lampshades have become very popular in recent years. They are often made with Opalescent or iridescent glass surrounded by lead calme soldered together to form a rigid frame. Mounted on an old lamp base or hung from the ceiling, this type of lampshade gives a very turn-of-the-century look to any room.

The lampshade

The lampshade opposite is in the Tiffany style, simple to make from yellow and amber Opalescent glass, although you can choose any colours you wish. It has straight sides and probably looks best hung from the ceiling. Once you have made this shade you can progress to other, more elaborate versions.

You will need:

Tools

See Glass chapter 7, page 798.

Materials

Yellow Opalescent glass, 60cm x 30cm (2'x1'). If you find yellow glass difficult to obtain try another colour such as green or white.

Amber Opalescent glass, 60cm x 30cm (2'x1').

Double-channelled lead calme, round type, 6.35mm ($\frac{1}{4}$") wide and 3m (10') long.

Single-channelled lead calme, round type, 3mm ($\frac{1}{8}$") wide and at least 85cm (2'9") long. Double-channelled lead is satisfactory though it does not give such a neat finish.

Tinman's solder, 1.5mm ($\frac{1}{16}$") thick.

Flux or a tallow candle.

Wire wool or wire brush.

Lasting nails, panel pins or other similar nails, small hammer.

Felt, thick cloth, or newspaper for padding the glass while cutting it.

Hardboard or smooth piece of wood at least 60cm x 60cm (2'x2').

Lampblack, or grate black.

Medium grade glasspaper.

Thin card 30cm x 7.5cm (12"x3").

Pencil, ruler, felt-tipped pen, pair of compasses, metal ruler and scissors.

Lamp fitting and lamp base. Tiffany lamps were traditionally fitted with two 'vase caps', a nipple (threaded pipe) and a metal loop (fig.1). Buy these after making the lampshade. The lampshade is satisfactory, however, with an ordinary lamp fitting; it can also be hung from the ceiling and in

A sophisticated Tiffany-style lampshade in brown and yellow Opalescent Glass. Designed by Alistair Duncan.

Jerry Tubby

this case a lamp base is not needed.

☐ Draw and cut out a template from the cardboard. Since each glass piece is the same size and shape as every other piece you will only need one template. Follow the measurements in fig.2 and start by drawing the 25.4cm (10") central line first. The curved bottom edge is drawn with a pair of compasses set at 3.2cm (1¼") radius and the point of the compass on the central line at X. Then draw in the short top line and finally draw the side lines.

☐ Cut out the template.

☐ Lay the felt or newspaper on a flat surface and place the yellow glass on top.
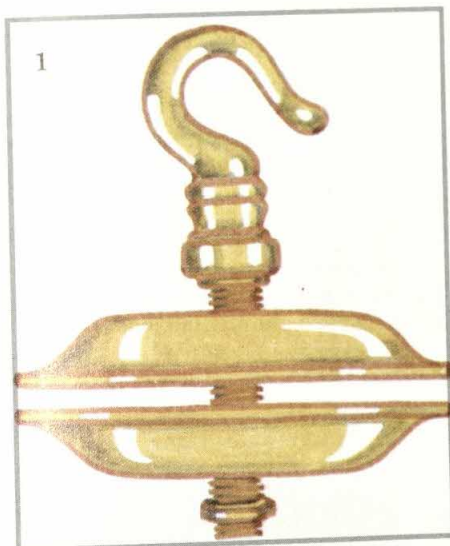
1. *Traditional Tiffany fitting. The lampshade fits between the vase caps.*
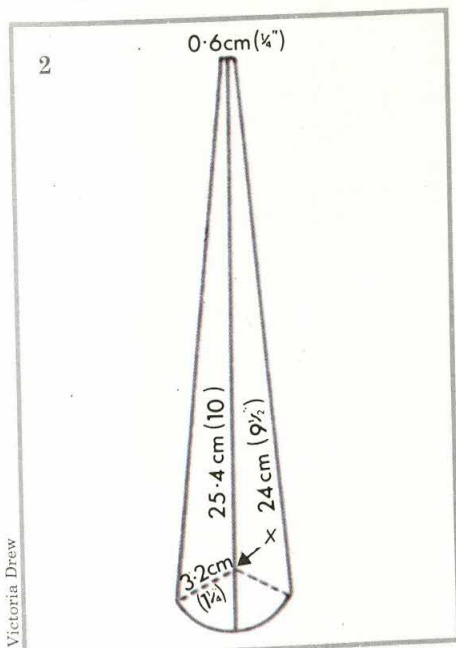
2. *Template for each lampshade section.*

The finished lampshade in yellow and amber Opalescent glass. Designed by Alistair Duncan.

1103

3
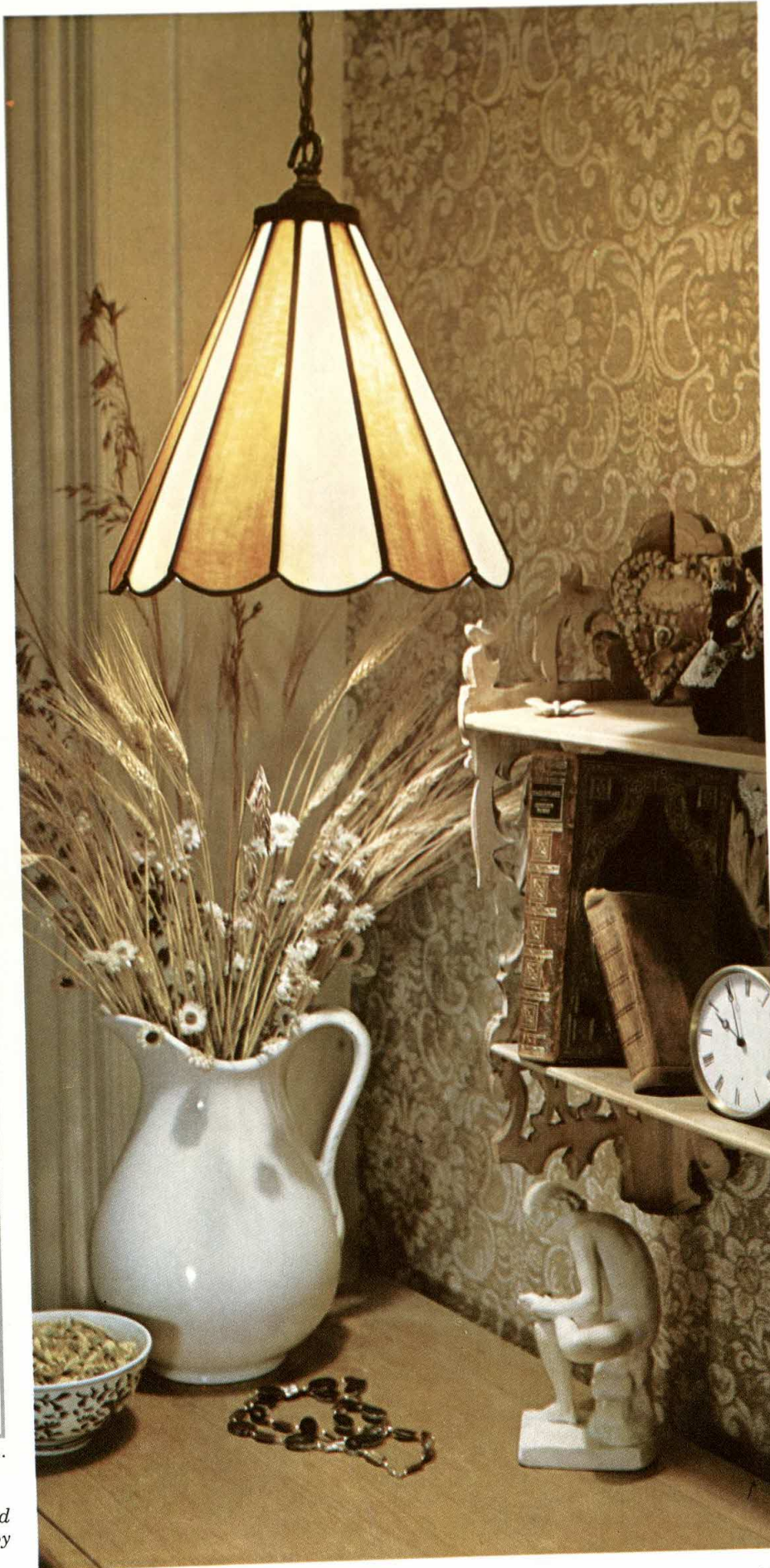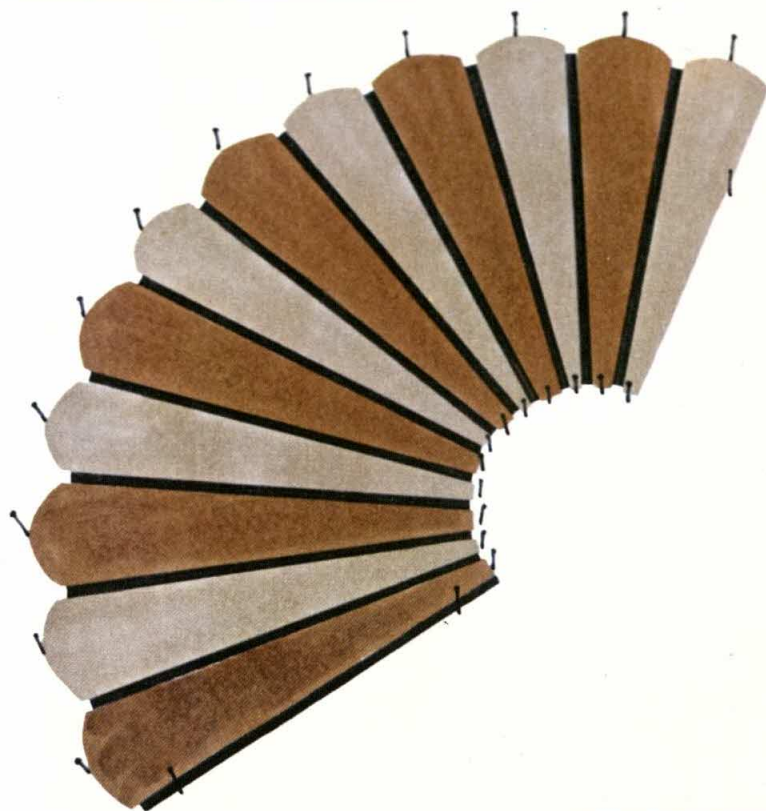
3. *The assembled glass and lead held in position with nails at top and bottom. Make sure each piece fits snugly.*

☐ Open the leaves of the lead with a lathekin, oyster knife or other strong knife.

☐ Hammer two nails into the hardboard about 20cm (8″) apart. Place a strip of lead against the nails.

☐ Position a glass panel into the exposed channel in the lead and then, by adding glass and lead alternately, build up the body of the lampshade (fig.3). The lead calme should not be quite as long as the glass and should be placed so that a small amount of glass is visible at either end. Remember to alternate the yellow and amber glass to create the design.

☐ Tap each piece of glass into its channel as you position it and smooth down the lead on to the glass with a lathekin or small piece of wood.

☐ As each piece of glass is positioned, secure it with a nail at top and bottom. The twelve panels, when assembled, form a fantail shape.

The next step is to add the top and bottom single-channelled lead.

☐ Starting at one end of the bottom border remove the nails one at a time

☐ Position the template on the glass at one corner and draw round it with the felt-tipped pen. Repeat five more times. You will have more glass than you need to allow for any breakages or difficulties in cutting.

☐ Score the lines on the glass with a glass cutter, using a ruler to ensure straight lines. Follow the instructions for cutting glass in Glass chapter 4, page 450.

☐ Turn the glass over and tap along the score line with the other end of the glass cutter until the glass cracks open.

☐ Repeat the process for the amber glass.

When you have finished cutting the glass there will be six yellow pieces and six amber pieces, all the same size.

☐ Put on a pair of goggles and with a pair of grozers or blunt pliers gently snap off small chips of glass at the corners of the narrow end of each piece of glass. The intention is to round the corners so the lead will more easily bend, and allow the panels to fold into a lampshade shape.

Leading. Stretch and straighten the lead as described in Glass chapter 7, page 798.

☐ Using a lead cutting knife or cut-down palette knife cut twelve strips of double-channelled lead 23.5cm (9¼″) long.

4. *Single-channelled lead covers the entire bottom edge. Work neatly and carefully for best results.*

4
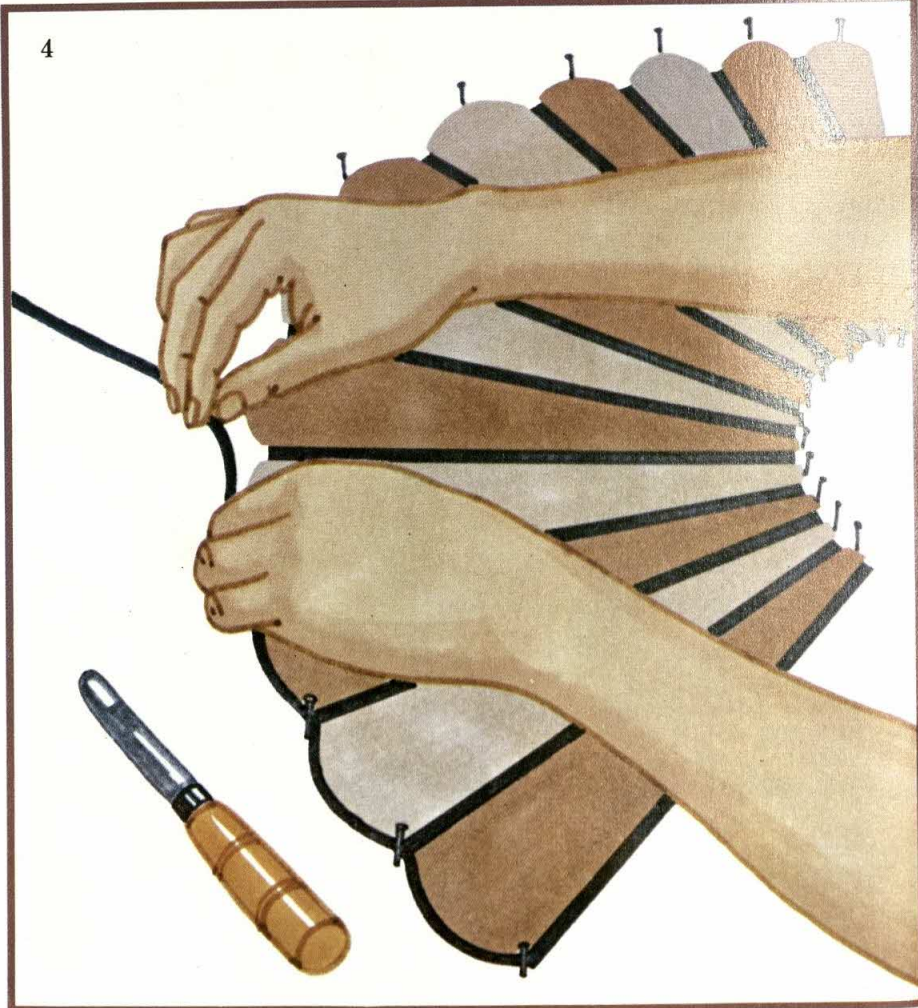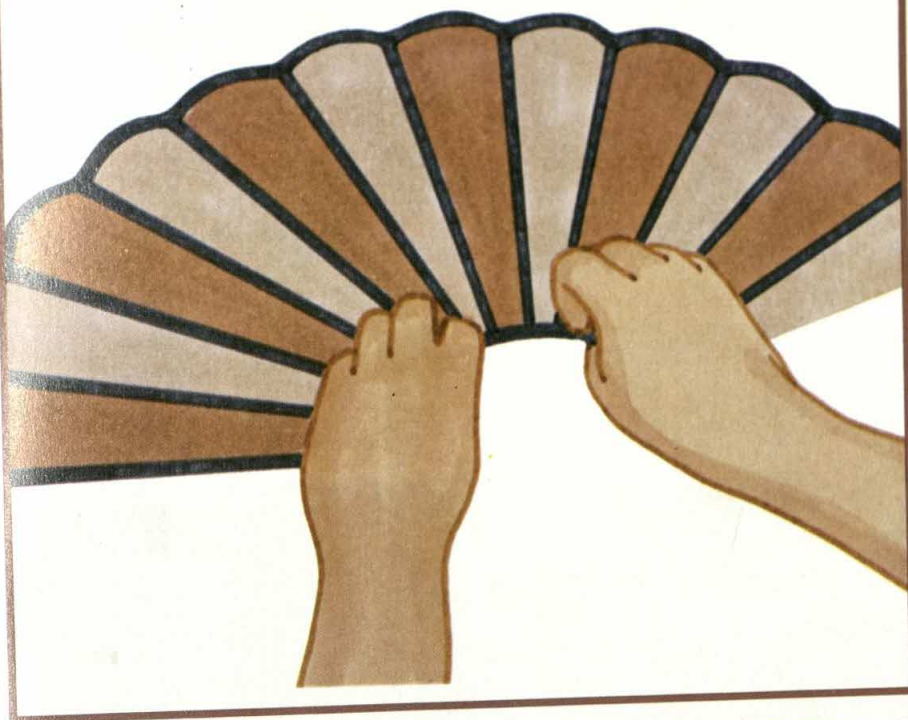
5

Hold the top edge and lift the soldered panels up, bending them round until both outer edges meet.

After soldering the top side remove the nails, turn the glass over and solder on the reverse side.

☐ Grip the top rim of the panels and raise them up while bending the two end panels round towards each other. Keep the bottom edge of the panels on the work surface to act as a brace. Keep an eye on the twelfth panel, which has no outside lead strip, to see that it does not slip out of place (fig.5).

☐ Bend slowly and firmly to ensure that the glass does not pop out of the lead channels or crack.

☐ After bending the panels of glass right round fit the remaining edge of glass, on one end of the shade, into the empty lead channel on the other end.

☐ Solder the top and bottom join on the inside and outside of this last join.

☐ Rub down the joins with medium grade glasspaper and polish with lamp-black or grate black for a good shine.

☐ Fit vase caps, nipple and metal loop (fig.1) to the lampshade for a traditional fitting; otherwise use an ordinary fitting. Support the lampshade on a lamp base or hang from the ceiling.

and fit the single-channelled lead along the entire edge, panel by panel (fig.4). Make sure that the lead touches the ends of the double-channelled lead by pushing it up firmly into the joins between each panel. Replace the nails as you border each panel.

☐ When all the panels have been bordered cut the lead square with the outer edge of the twelfth panel.

☐ Repeat for the top border.

All except the twelfth panel are laid out so they are housed on both sides with double-channelled lead. All twelve pieces are bordered at top and bottom edges with single-channelled lead, all pressed firmly together and held in position with nails. Only the outside edge of the twelfth panel is exposed; this will fit into the first strip of lead when the panels are bent round to make the lampshade shape.

Solder all the joins of the lead calme following the method described in Glass chapter 7, page 798. Be sure to clean all joins with wire wool or wire brush before soldering. Make certain that solder does not run between glass and lead as this could cause difficulties when bending the panels. Be careful not to melt the strips of lead but, if you do, replace them immediately.

Close-up of the lampshade: an alternative fitting is made by flattening single-channelled lead, wrapping it round the top of the lampshade and soldering it to both lampshade and vase cap.

Dick Miller

Making oval wine cradles
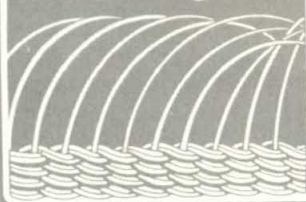
The wine cradles illustrated are made with oval bases. The techniques involve packing one end to support the top of the bottle and a variation of it making a recess for the neck of the bottle. Two types of handles are made. The first type consists of two flexible curved handles and the other is a secure T-shaped handle. The completed cradles can be dyed or stained with wood stains if you wish.

You can design your own baskets. For example you can pack both ends of the oval base to make a fruit or flower basket. Make a cross handle and wrap it with chair seating cane or use cane for a rope effect (Basketry chapter 5, page 724).

Cradle with curved handles

The base of the cradle measures 17cm x 10.5cm (6¾"x4¼") and after packing, it is 27cm (10½") long.

You will need:

Tools and techniques as described in previous Basketry chapters.

28gm (1oz) No.3 (2mm) cane.

28gm (1oz) No.5 (2.5mm) cane.

57gm (2oz) No.6 (2.6mm) cane.

57gm (2oz) No.8 (3mm) cane.

No.10 (3.35mm) cane, 1.83m (2yd) long —for the base sticks.

8mm ($\frac{5}{16}$") handle cane, 1m (1yd) long.

No.2 (1.85mm) chair seating cane, 1m (1yd) long—optional for wrapping the base sticks.

No.6 (2.6mm) chair seating cane, 5.5m (6yd) long—for handle wrapping.

Sticky tape.

All-purpose adhesive.

To make the base. Cut 6 sticks 11.5cm

Peter Heinz

(4½") long and 3 sticks 18cm (7") long, all from No.10 (3.35mm) cane.

☐ Pierce the short sticks in the centre and thread the long ones through to form an oval pattern with the short sticks grouped in the centre with a space of 1.6cm (⅝") between each. Wrap the long sticks with No.2 (1.85mm) chair seating cane—this is optional. (See Basketry chapter 5, page 725.)

☐ Pair and reverse pair with No.3 (2mm) cane so that the base measures 15cm x 9.5cm (6"x3¾"). Make the base slightly concave—the dome will form the inside of the basket.

Put on the pairing and the reverse pairing in any pattern, but use an equal number of rounds of each. Chain pair if you wish—it is very attractive (Basketry chapter 6, page 917).

☐ Trim surplus base sticks once base weaving is completed.

Upsetting

☐ Cut 27 stakes of No.8 (3mm) cane, 16 of these must be 30.5cm (12"). Gradually increase the length of the remaining eleven to a maximum of 35.5cm (14"). This is for the forward end, or front, which juts out and is slightly higher than the rest of the basket.

☐ Point one end of each stake and insert them into the base so that the odd one out is a short stake at the back of the basket. The longer stakes are arranged round the front end with the longest stake in the centre.

☐ Nip the stakes close to the base weaving and bend them upwards. Tie them together at the top.

☐ Upsett with one round of 4-rod waling and continue with a 3-rod wale for 2 more rounds, all with No. 6 (2.6mm) cane. Step-up after each round.

☐ Cut 27 bye-stakes of No.5 (2.5mm) cane, 21 of these are 10cm (4") long and the remaining 6 are 30.5cm (12") long.

☐ Point one end of each and insert them into the upsetting, one on the right side of each stake. The longer bye-stakes must be arranged at the front with the longer stakes. These long bye-stakes will eventually become 'stakes' to help form the lip of the basket.

☐ Put on 10 rounds of randing with No.6 (2.6mm) cane. Keep the sides and the back going up vertically but ease the front stakes slightly forwards and outwards.

☐ Wale for 3 rounds with No.6 (2.6mm) cane still shaping the front of the basket.

☐ Put on 6 rounds of randing with No.5 (2.5mm) cane and keep shaping the front. Finer cane is used for this randing so that it is easier to shape the lip or front of the basket.

☐ On the next round of randing, divide the 6 long stakes and bye-stakes at the front, so that they become singles.

☐ Rand for 2 more rounds keeping the front stakes single and shaping the lip well to the front.

Packing

☐ Build up the lip by randing backwards and forwards with No.5 (2.5mm) cane. Start at the fifth stake from the centre of the back and weave towards the front, around the front to the fifth stake before the centre of the back.

The blue wine cradle is dyed with wood stain. The cradle is made exactly like the one next to it but the handle is different. Designer Barbara Maynard.

Detail of packing to form lip.

Bend the weaver right round this stake and weave back along the previous round but to one stake less than from where you started. Keep repeating this, randing backwards and forwards, one stake less each time on both sides, until you are only weaving round the last 2 stakes. Keep shaping the lip while doing this. Leave the end of the weaver on the inside of the basket.

☐ Wale all the way round with No.6 (2.6mm) cane for 2 rounds.

☐ Trim all the surplus ends of the *21 shorter bye-stakes*. Be careful not to cut off the 6 longer bye-stakes as they will be used for the border.

Border

☐ Re-soak the stakes if necessary and nip them 6mm (¼") above the waling. Put on a 4-rod border. Trim all the surplus stakes and weavers.

The handles

☐ Cut 2 pieces of 8mm (5⁄16") handle cane 53.5cm (21") long. Make a tongue at both ends of each by cutting away most of the thickness of the cane on one side (fig.1). Start the cuts 15cm (6") in from the ends. Don't make the usual slanting cut but cut away quite sharply and then straight down to form a tongue. Both cuts on each handle piece must face the same way.

☐ Soak the cane well and bend it to the shape you require. Push the two tongues into the basket from the outside and underneath the top waling. Position them as illustrated, near the fourth stake from the back and the front (see overleaf).

☐ Bend the tongues up and over the border to meet the main part of the handle (fig.2). Keep the 'eyelet' that is formed round by shaping it with your

1. *The handle cane is cut to form a tongue.*

fingers or by bending it round the handle of a bodkin. Make sure both handles are the same length and height.

☐ Secure the tongues to the main part of the handles with sticky tape and leave the work to dry. Remove sticky tape and stick into position with all-purpose adhesive and secure again with sticky tape until dry.

☐ Wrap each handle with No.6 (2.6mm) chair seating cane. Bend this cane about 5cm (2") from one end so that it forms an L-shape just above the eyelet, ie where the tongue joins the handle (fig.3).

☐ You are now ready to start wrapping with the long end. Put a piece of chair seating cane in the work to go over the top of the handle and wrap it in with the short end around the handle. Continue wrapping, making any pattern you wish with the leader. (Basketry chapter 1, page 222.)

☐ Wrap across to the other side to the edge of the eyelet hole to finish with four plain rounds of wrapping.

☐ Finish by tucking the end back up inside the wrapping. This is done by loosening the wrapping and pulling the end through and then tightening the wrapping again. It can also be secured by pushing it through the join by the tongue and the handle and keeping it in position with all-purpose adhesive once the cane is dry.

☐ Repeat for the other handle.

Cradle with T-handle

The base for the cradle (shown here) is made exactly like the one for the previous cradle. The overall size is similar but this one has a plait border with a recess for the neck of the bottle in the packing.

You can change the design and put on the handles used in the previous cradle if you wish. The borders are also interchangeable.

You will need:
28gm (1oz) No.3 (2mm) cane.
85gm (3oz) No.6 (2.6mm) cane.
57gm (2oz) No.8 (3mm) cane.
No.10 (3.35mm) cane, 1.83m (2yd) long —for the base sticks.
No.2 (1.85mm) chair seating cane, 1m (1yd) long—optional for wrapping the base sticks.
No.6 (2.6mm) chair seating cane, 5.5m (6yd) long—for handle wrapping.
8mm ($\frac{5}{16}$") handle cane, 1.22m (48") long.
Handle liners, 3.
All-purpose adhesive.
1 small panel pin or nail.

☐ Make the base as before.

☐ Upsett and continue as for the previous cradle until you have to cut the bye-stakes.

☐ Cut 27 bye-stakes of No.8 (3mm) cane—16 must be 10cm (4") long and the remaining eleven must gradually

increase to a maximum length of 18cm (7"). Point one end of each and insert them into the waling, one on the right side of each stake. Arrange them so that the longer ones are at the front and in the correct order.

☐ Rand for 10 rounds with No.6 (2.6mm) cane.

☐ Insert the handle liners, one in the centre back and the other two—one on either side—at the sixth cane from the front. These 2 must be more than half-way towards the front to balance the basket when tipped to pour the wine.

☐ Cut 2 pieces of 8mm ($\frac{5}{16}$") cane 15cm (6") long. Point one end of each and soak them well.

☐ Insert these 2 sticks into the weaving at the front to form the edges of the opening. Insert them next to the 2 stakes that are immediately to the left and right of the centre stake so that only one stake is left in the middle. Remove and discard the bye-stakes if necessary to insert the sticks more readily.

☐ Bend the sticks well forward into the shape that you intend for the opening.

☐ Rand with No.6 (2.6mm) cane all the way round for 9 rounds. Press the front stakes forwards.

Packing

☐ Build up the front as before, but this time leave a gap in the work. Start as before at the fifth stake from the back and rand as far as the thick stick at the front. Wind the cane round that stick and back along the same side to one stake less. Every other time you pass the thick stick pass the cane round it twice so that it builds up well and completely covers the stick (fig.4).

☐ Continue like this until you are weaving round the last two stakes. Leave the cane on the inside of the work.

☐ Repeat on the other side and make sure both sides are the same height.

☐ Put on 4 more rounds of randing on each side by working backwards and forwards. The gap at the front should now be about 4.5cm (1¾") deep.

☐ Insert 3 weavers of No.6 (2.6mm) cane next to the first three stakes next to the gap at the front. Wale right round to the other side, cut off the weavers and insert the ends into the weaving.

☐ Cut off all the surplus bye-stakes including the one at the front in between the two thick sticks.

☐ Re-soak the two thick sticks if necessary and cut them off so that they

2. *The tongue is pushed through the weaving and folded back.*

3. *The tongue is secured by wrapping it with chair seating cane.*

4. *Packing the front to form the lip with a recess for bottle's neck.*

Barbara Maynard
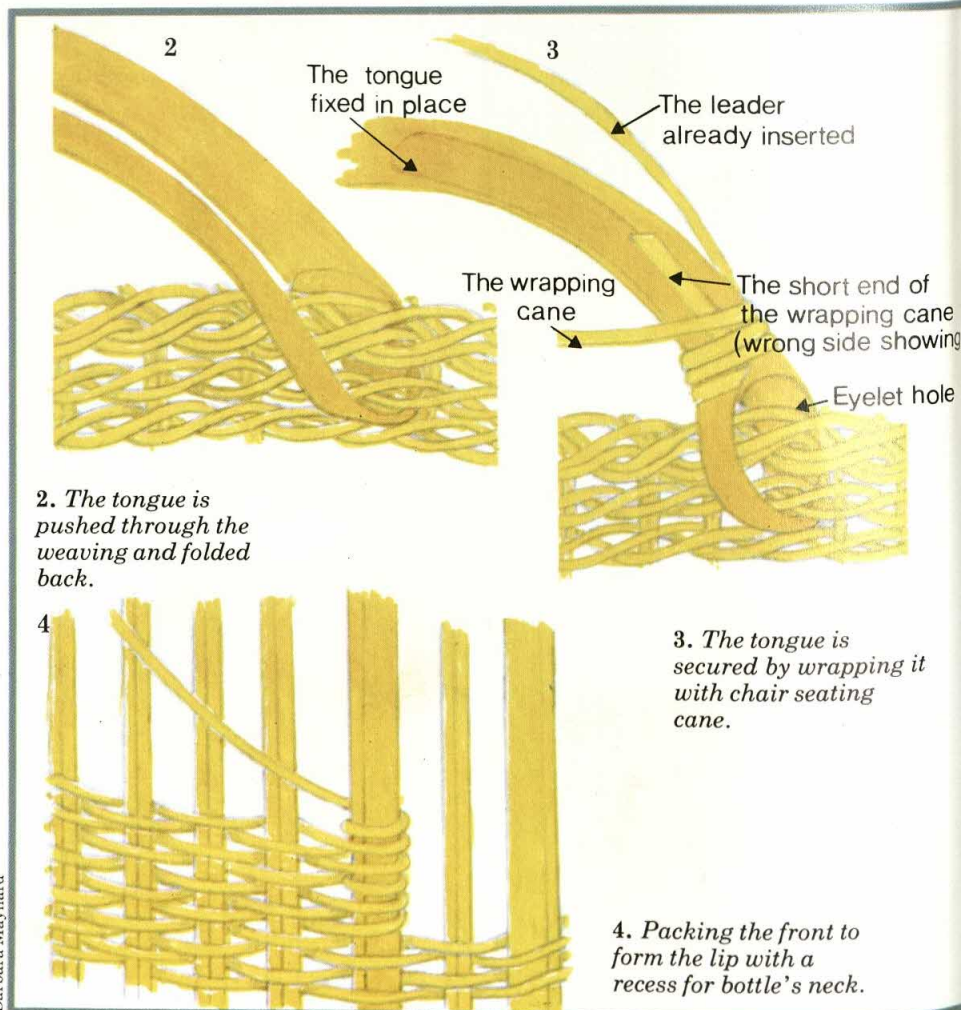
are level with the weaving.

Plait border

☐ Cut 4 pieces of No.8 (3mm) cane, 20cm (8") long and point one end of each. These are border stakes for the gap. Insert 2 into each thick stick one 13mm (½") from the top and one 13mm (½") from the bottom of the gap.

Insert them by making a hole in the stick with the bodkin and pushing the pointed end of the border stake into the hole (fig.5). Make sure that they are firmly in place. If not, make the holes bigger and try again.

☐ Starting towards the back put on a plait border all the way round the cradle, over the edge of the thick sticks, down the side of the gap and up the opposite side. (See Basketry chapter 6, page 917.)
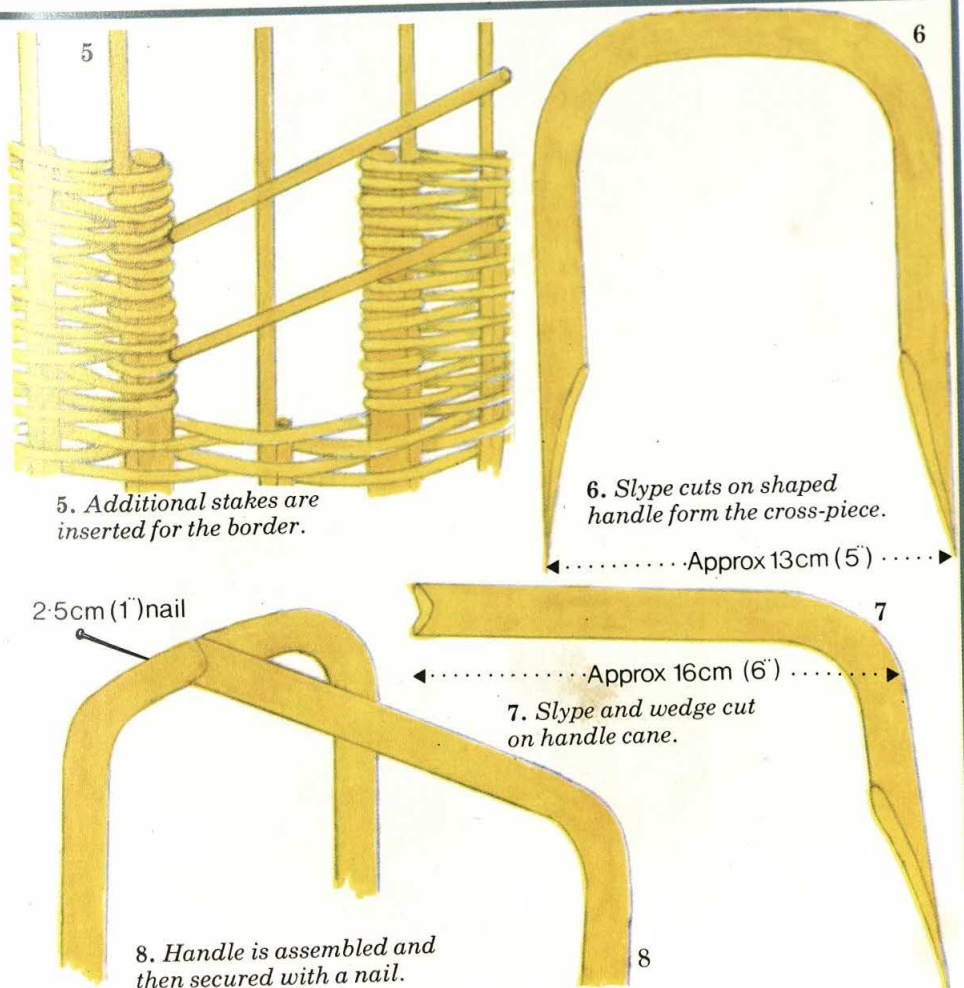
Handles

☐ Cut 2 pieces of 8mm (5/16") handle cane, one 30.5cm (12") long and the other 51cm (20") long. Slype both ends of the longer piece and bend it into a U-shape with a flat bottom (fig.6).

☐ Remove the handle liners along the sides and insert the handle cane.

Right: wine cradle with recess to hold the bottle's neck. The handle is similar to the one on the blue cradle.

Peter Heinz

5. *Additional stakes are inserted for the border.*

6. *Slype cuts on shaped handle form the cross-piece.*

··········Approx 13cm (5")·····▶

2·5cm (1") nail

◀·············Approx 16cm (6")·······▶

7. *Slype and wedge cut on handle cane.*

8. *Handle is assembled and then secured with a nail.*

☐ Slype one end of the shorter piece of handle cane and bend the cane 15cm (6") from the pointed end (fig.7).

☐ Remove the handle liner at the back and insert the slyped end of the handle cane so that it is leaning towards the other handle cane.

☐ Cut a wedge into the forward end of the handle so that it fits snugly into the cane of the cross handle.

☐ Leave these handles in this position to dry.

☐ Stick the wedge-cut to the cross handle and nail through the cross handle so that the nail passes into the end of the other part of the handle (fig.8).

☐ Using No.6 (2.6mm) chair seating cane wrap the handle by starting at the back with the usual cross and leader. When you are 2.5cm (1") from the cross handle take the leader right over the top and round to the underside. Continue wrapping so that the end of the leader is also bound in. Peg the end of the wrapping cane, which will be bound in later.

☐ Wrap the cross handle in the usual way, using a leader as before. When you reach the centre bind in the wrapping cane from the other part of the handle. Criss-cross the wrapping over at this point so that the handle cane is completely covered. Keep the pattern of the leader the same as for the other side and finish off.

☐ Peg all three ends of the handle just under the waling.

Introduction to rug making

Rugs can be woven, knotted, hooked, stitched and even plaited, knitted and crocheted. With all the methods you can use new materials or you can recycle old fabrics and yarns to make hard-wearing and attractive floor coverings.

In one traditional method of rug-making the foundation is woven on a loom and the pile threads are knotted on to it by hand. A variation of this

method, which is simple to do at home, is to buy a woven canvas foundation and insert the pile into it with a latch-hook.

Equipment

Latch-hooks look like crochet hooks but have a wooden handle and a hinged latch which closes round the hook to prevent it from being caught in the canvas as the knot is formed. Latch-hooks are not expensive and can be bought from most handicraft shops. They are easy to use and once you get into a rhythm the rug grows quite quickly. For extra speed, you could buy a second hook so that two people can work on the rug at the same time, by working from opposite ends of the canvas.

The yarn. For making a short-pile rug you can buy a special coarse 6-ply rug wool—often called Turkey wool—or a 3-ply acrylic yarn. Both types of yarn are available in skeins which you cut to the length you want or they can be bought in packs of 320 pre-cut pieces, 7cm (2¾") long. Each piece makes one knot with two strands of pile about 2cm (¾") long and one pack of wool covers just over three 7.5cm (3") square blocks on standard rug canvas.

The advantage of buying the cut packs is, of course, that you are saved the trouble of cutting the pieces yourself. On the other hand, you are restricted to the same length of pile throughout and some of the most unusual designs include areas of different pile height. You will in any case have to buy some skeins of uncut yarn in order to finish the edges of the canvas.

Cutting your own pile. When calculating the length of each strand, remember that each strand forms two lengths of pile and the knot uses up about 3cm (1¼") of yarn. Therefore for a 5cm (2") length of pile, for example, you should cut the pieces 13cm (5¼") long.

To cut the pieces in this case, use a piece of firm cardboard 6.5cm (2⅝") wide and wind the yarn round it. Cut yarn along one edge of the card.

Canvas with holes large enough to take the thick rug wool is often known as Turkey or Smyrna canvas. It is woven with double threads for strength and has 10 holes to 7.5cm (3"). It can be bought in different widths from 30.5cm-122cm (12"-48").

To make counting individual squares easier, the canvas is divided into blocks of 7.5cm (3"), marked by different-coloured thread, usually red or brown. If you are making a rectangular or square rug you should buy the exact

Latch-hooking is a relaxing pastime and a quick and easy way of making fabric with a thick, hard-wearing pile, ideal for rugs and cushions.

Latch-hooking equipment—the latch-hook, Turkey canvas and cut yarn. The 7.5cm (3") grid is marked by the coloured weft and warp threads which divide the canvas into 10-hole blocks.

width you want by 10cm (4") longer than the required length. For round rugs and cushions of any shape you should buy an amount which is at least 10cm (4") more than the required diameter.

Re-cycling materials. The latch-hook method can also be used for re-cycling strips of old fabrics and yarn. Before you start work you should experiment to see how wide the fabric strips should be cut or how many strands of yarn you would need in each knot in order to cover the canvas satisfactorily. With a double-knitting yarn, for example, you would probably need three or four strands in each knot.

The design

Short-pile, latch-hooked rugs lend themselves well to pictorial and oriental designs, and other attractive rugs can be based simply on geometric patterns or subtle blends of colour which may not form a definite pattern. In the same way as for needlepoint, it is possible to buy the canvas already printed with the design together with the necessary amount of yarn.

Alternatively you can choose a design printed on a chart or you could adapt a chart designed for needlepoint on a finer canvas, but you should avoid those with very fine detail as they lose their subtlety because of the thickness of the yarn and the pile. Or, if you are more ambitious, you could make up your own design.

Making your own design. Whether you choose an elaborate theme or prefer a more random effect it is advisable to work out your design to scale to give you the chance to adapt and improve your design before you start

work. You will also be able to work out how much of each colour yarn to buy, so that you do not run the risk of having to use yarn from different dye lots, and you will be able to work the knots across the rug in straight lines from one end of the canvas.

If instead you work areas of colour and then fill in the background, the result is likely to be uneven and you might miss squares because they are hidden by other knots. The exception to this is with geometric designs where you could work the basic outline first and then fill in the areas enclosed by it.

Transferring the design. Intricate designs can be transferred on to the canvas by painting in the same way as for needlepoint (see Needlepoint chapter 4, page 544). For less complicated designs which have bold outlines or large areas of one colour, you can trace the design on to the canvas with felt-tipped pen.

Calculating the amount of yarn. The only sure way of calculating the amount of yarn for each different colour in an intricate design is to count the number of knots to be worked. Draw out the design on graph paper and draw on your design to scale so that each square represents one hole on the canvas.

For less intricate designs where you are working large areas in one colour, it is normally possible to gauge the amount of yarn required by measuring each area.

Basic knots

Four-movement knot

The quickest knot consists of four movements.

Fig.1 Fold the cut length of wool in half and loop it round the neck of the hook below the crook and latch.

Fig.2 Holding the ends of the wool between the thumb and index finger of your left hand, insert the hook under the first of the weft threads (those running from left to right, across the canvas).

Fig.3 Turn the hook a little to the right, open the latch and place the ends of the wool into the hook.

Fig.4 Pull the hook under the thread and through the loop of wool. As you pull, the latch will close to prevent the hook from getting caught in the canvas.

Fig.5 Pull the ends of the wool tightly to make the knot firm.

Five-movement knot

When two people are working from opposite ends, one person should use the five-movement knot so the pile will lie in the same direction.

Fig.6 Insert the hook under the first weft thread. Fold the cut length of wool in half and, holding the ends between your thumb and index finger, loop it over the hook.

Cushions

The latch-hook method makes attractive and hard-wearing cushions, such as the floor cushion shown in the photograph. The pile can be worked on both sides of the cushion or, if you prefer, you could make the back of the cushion from fabric.

Starting and finishing. Because the raw edges are enclosed inside the finished cushion, you can leave an unworked margin of canvas for 2.5cm (1″) all the way round and use this for your turnings when you make up the cushion. Alternatively, if the size of the cushion corresponds to the width of canvas available, work the knots up to the selvedges and use the selvedges as a narrow turning. Allow 2.5cm (1″) at each raw edge for turnings because the canvas may fray.

Sun floor cushion

These instructions are for a cushion 90cm (36″) square but they can be adapted for a smaller cushion by reducing the quantities proportionally.

You will need:

Canvas, 1 metre (39″) of 90cm (36″) rug canvas, 10 holes per 7.5cm (3″).

Rug yarn, (320 pieces per pack): 12 cut packs green; 10 cut packs yellow; 7 cut packs orange; 18 cut packs off-white.

Latch-hook.

The simple sun motif makes a luxurious indoor or outdoor floor cushion: you can choose a colour for the border to tie in with your scheme. The yarn illustrated is Pingouin Tapis acrylic in green (shade 168), yellow (shade 161), orange (shade 152) and off-white (shade 105).

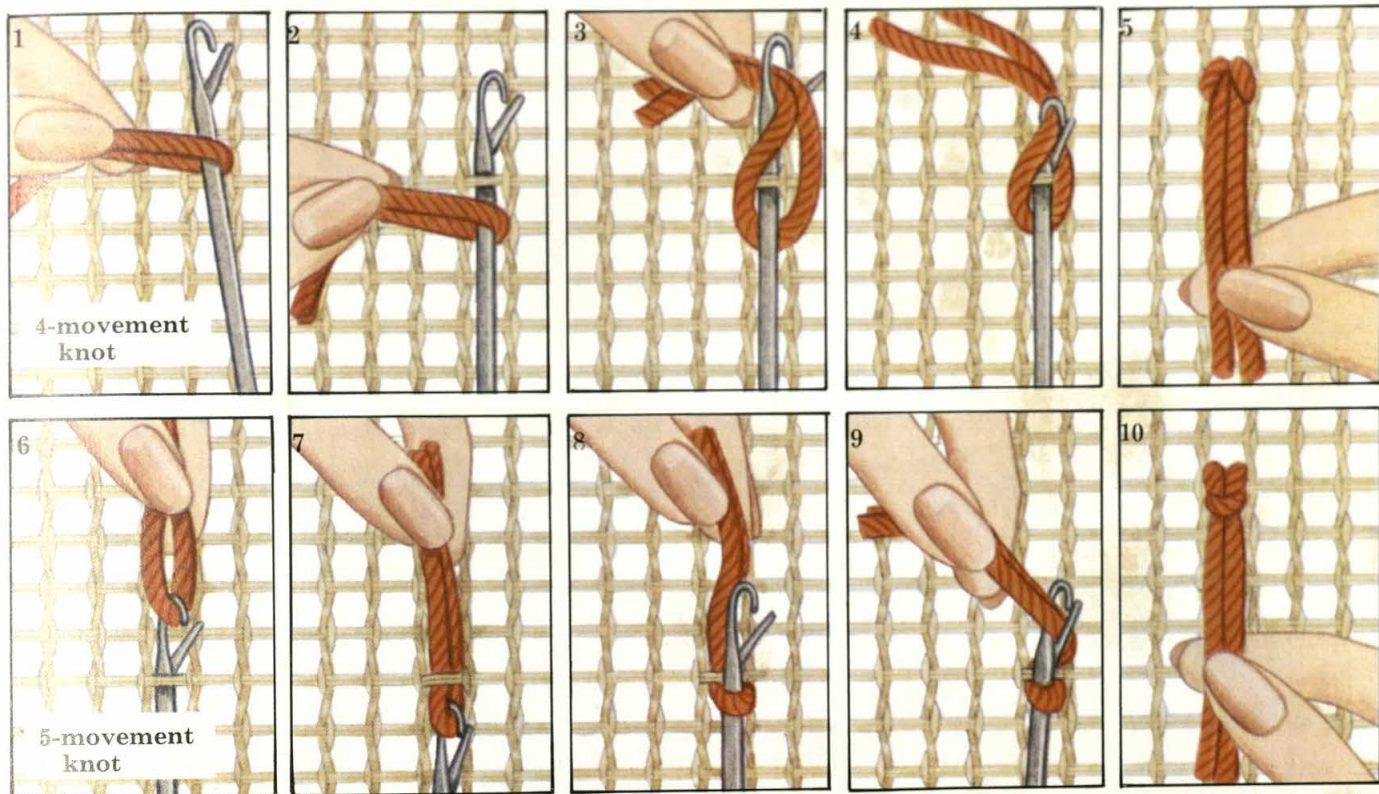4-movement knot

5-movement knot

Barbara Firth

Fig.7 Pull the hook back through the canvas.
Fig.8 Push the hook through the loop of wool until the latch is clear and the loop is on the neck of the hook.
Fig.9 Place the cut ends of wool into the crook of the hook from below, so they are enclosed by the latch.

Pull the hook back firmly through the loop of wool until the ends are clear.
Fig.10 Pull the ends of the wool tightly to secure the knot.

Backing fabric for cushion, 1 metre (39″) square, such as hessian or velvet.
Matching sewing thread, needle.
Felt-tipped pens in colours to match yarns.
Cushion pad, 90cm (36″) square.
☐ Enlarge the design to scale (see Design know-how chapter 4, page 112) and mark in the colours. Centre the rug canvas over the design and trace the shapes of the areas on to it in the appropriate colours. Leave the blank canvas at each edge for the turnings.
☐ Work the knots in straight rows across the canvas.
Making up. Stitch back of cushion to canvas, with right sides facing, by machining with a piping foot along the line of canvas nearest the first and last rows of knots and along the inside edge of one of the selvedges. Leave the remaining side open.
Trim the raw edges to within 1.5cm (½″) of the stitching. Do not trim the selvedges.
☐ Turn the cushion cover right side out and press the seams with your fingers.
☐ Insert the cushion pad, fold under the turnings along the open side and slip stitch firmly.
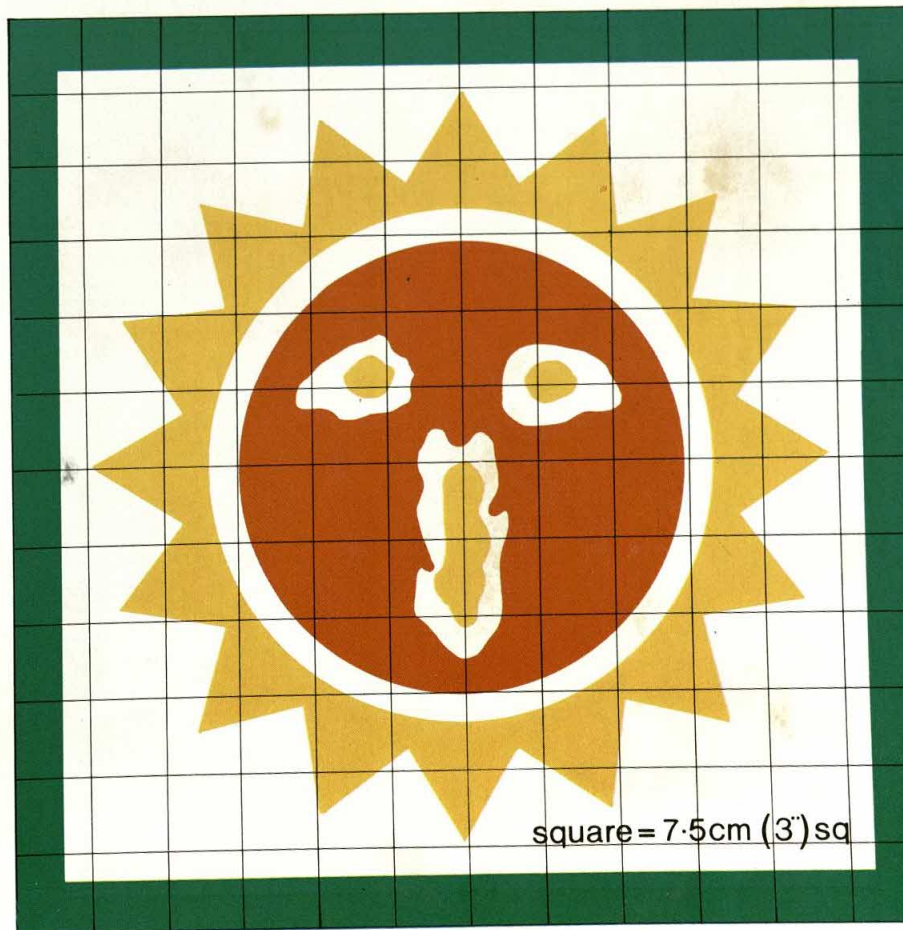
Graph pattern for cushion. You will find that most rug canvas is woven with a 7.5cm (3″) grid line.

square = 7·5cm (3″) sq

Trevor Lawrence

Mixed media printing

A variety of printing techniques has been discussed in previous chapters. Some, such as potato printing, are simple and direct while others, like screen printing, require considerable preparation yet are more efficient for printing several motifs at a time or printing a repeated design.
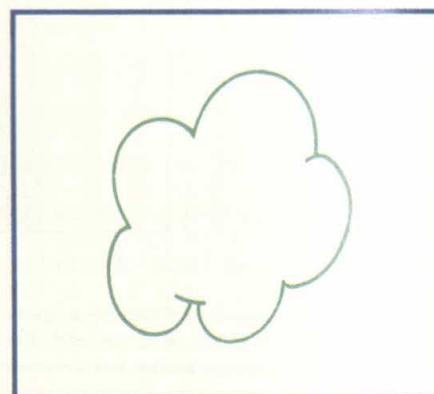
Choosing the right technique

Before you begin to print you must first decide which technique will be best for your design. This depends
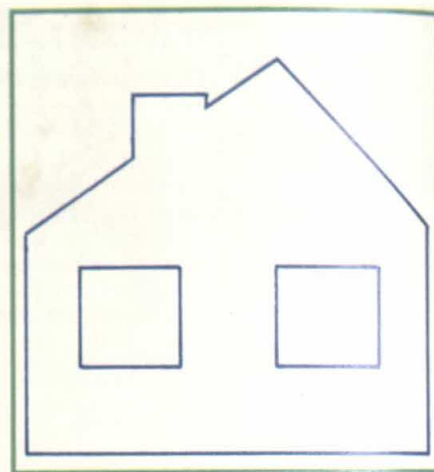
1. *House is suited to lino cut, ordinary stencil, potato or screen printing.*

2. *Tree motif can be stamped on with a potato or screen printed in repeat.*

partly on the placement of the design and the amount of repeat printing involved. If you are printing a repeat pattern on a length of cloth then you might choose screen printing as your method while a single motif on a pocket would be easier to cut from a potato or lino block and stamp on.

Mixed techniques. There is no reason to confine your efforts to one form of printing, however, even on one garment. It can be a definite advantage to combine two methods and the house and tree motifs shown illustrate this.

House and tree fabric

The clothes and doll patterns shown are printed on a cotton sheet. The outlines of the garments can be drawn in tailor's chalk or with a pencil.

The house and tree (figs. 1 and 2) were screen printed with a simple paper stencil but both were also cut from potatoes. This way small areas which require only a single or very few motifs can be quickly stamped. This also facilitates the special placement necessary on the circular bib.

This design was made by combining screen printing and potato printing methods to facilitate placement of motifs.

The variety of arrangements possible using the same motif is well illustrated by designs which are printed on a cotton sheet following shape of patterns.

Two colours. If you use a screen to print repeats of both the house and the tree motifs then you will need to make a separate stencil for each colour. You might therefore find it more desirable to screen print *only* the houses and to stamp the trees in place with the potato.

To align the motif borders use tailor's chalk and a ruler to make a base line. (For an all-over repeat pattern, make a grid as described in Printing chapter 15, page 1028.)

Printing chapters 13 to 16 deal fully with screen printing using different stencils and surfaces while Printing chapter 4, page 302, describes potato printing methods in detail.

This simple yet charming design shows how different media can be used together effectively in printing.
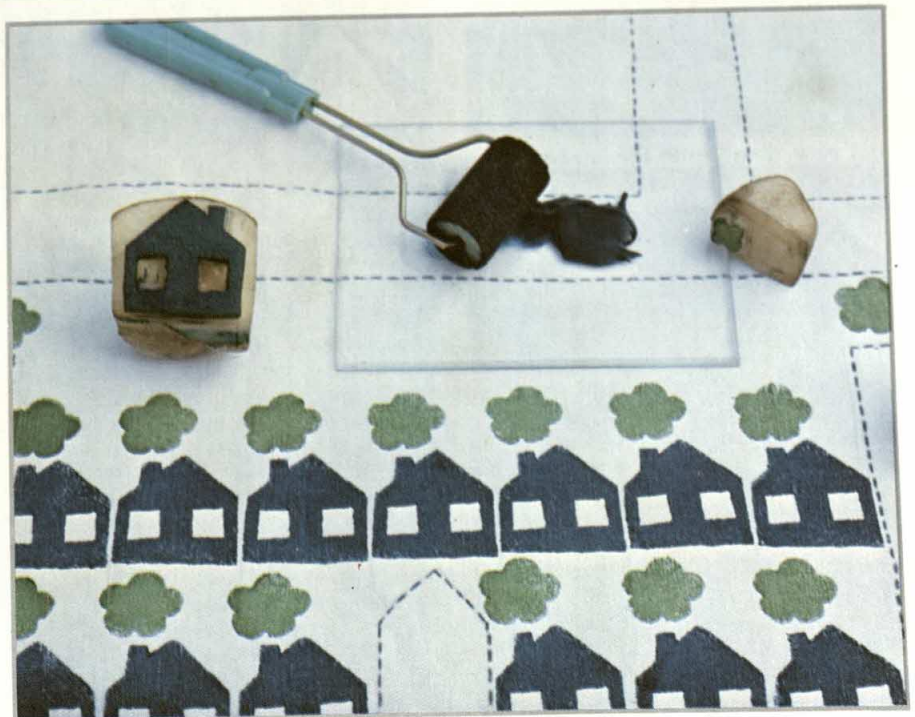
Gluing tumbled baroque stones

Apart from their obvious place in jewelry making, baroque tumbled stones can be used very effectively to make and decorate other things for use in the home and office, and to provide unique and original presents.

Simply gluing the stones on to a flat surface is very easy. Designing your decorations is fun—and it need not work out expensive. In fact, it is particularly rewarding to see how a 'throwaway' object can be transformed by a little imagination and a few well-chosen, gleaming stones. Non-returnable packaging, although intended for the waste paper basket, is often well designed and quite sturdily constructed —so you can get long life and much pleasure from re-cycling it.

Re-cycling plastic containers

The plastic containers in which cosmetics are sold are often very prettily shaped, and can easily be turned into highly attractive and personalized jars and pots that warrant pride of place on the dressing table or elsewhere.

Thoroughly clean the jar in warm soapy water, soaking off the manufacturer's labels. Dry well and, if you feel the jar should be a more interesting colour, paint it with a shade chosen from a range of paints sold by model shops for plastic model kits.

Choose stones with one flattish side and glue them on to the surface to be decorated with epoxy resin adhesive, using the same procedures as for jewelry making (see Lapidary chapter 2, page 276).

It is usually most effective—and cheaper too—to use a few gemstones only. The shapes of cosmetics jars and pots are often so decorative in themseves that just one simple motif or your monogram on the lid, possibly repeated on the side of the jar, is enough. Too many stones and too intricate a design can look overdone.

Some cigarettes are sold in plastic drums. These can be given the same treatment and, once decorated, revert to their original role or become elegant holders for pencils and pens. Even margarine tubs, yoghurt pots and disposable plastic drinking cups can be turned into attractive little vases or (with the bases pierced for drainage) containers for potted plants or growing herbs. The plastic screw-top lids of old glass coffee jars can also be decorated and the jars used as attractive containers for bath salts or coloured cotton wool balls for display in the bathroom.

Wine bottle table lamps

Coloured glass makes a lovely background for showing off polished tumbled stones, and old wine bottles studded with stones can make inexpensive and very attractive table lamps. Many shops sell lamp fittings with adjustable cork or plastic stoppers which can be pushed into the neck of the bottle. If you don't want the flex to dangle down the side, ask a glazier to drill a hole in the side, near the bottom of the bottle, wide enough for the flex to pass through from the inside. Remember to ask him to smooth off the edges of the hole as rough edges are liable to cut into the flex.

For stability the best kind of bottle is a large flagon with a solid broad base. If you do choose a slim, elegant wine bottle either seal the gap between flex and glass and then fill the bottle with sand, or be sure to put the lamp in a place where it cannot easily be knocked over.

If the stones are too big, they will not fit the convex curve of the bottle, so choose smallish stones, with one fairly flat side. File the flattest side of each one (or sand with coarse glasspaper if stones are soft) and use a contact adhesive such as Bostik 3.

Jewel studded candlesticks

The soft glow of candlelight is also good for emphasizing the rich colours of tumbled stones, and jewel studded candlesticks look very attractive.

Spiked metal candlesticks for large fat candles are available from many chain stores as well as craft shops. Some are shiny and look like brass, and others have a matt black finish. Since they are always small, you won't need many stones even if you decide to cover the metal completely.

Don't worry about the thought of spilt wax. This can be washed off the stones quite easily with hot soapy water. But do take care to dry the candlesticks thoroughly, or the metal may corrode. Buy a candle of suitable width and height for the candlestick. Place it on the spike and draw round it with a pencil. Remove the candle and replace it with a protective cork, then stick your stones in position using an epoxy resin adhesive. Colours can match or contrast with your candle, and the pattern can be anything you like—but be sure to stick all stones outside the pencilled circle only, or your candle will not fit!

Decorating boxes

Plain boxes made of wood or metal can be bought quite cheaply or you may have some about the house—old biscuit tins, sweet tins, tobacco and cigarette tins, wooden date, Turkish delight, glacé fruit or cigar boxes left over from a festive treat. Handsomely decorated, they can make charming presents—really small ones make delightful pill boxes, medium-sized ones provide pretty storage for things such as hairpins or stamps, and a larger one (lined with a thin layer of foam covered with a remnant of silk or velvet) would make the perfect jewel case in which to keep your own tumbled stone jewelry.

If a wooden box is at all rough, smooth it by sanding, then apply a coat of wood primer. When this is dry, paint the box with clear polyurethane varnish if you want to keep the natural appearance of the wood. Alternatively use gloss, satin or eggshell finish paint in a colour to match or compliment the stones you intend to use.

A largish area offers the opportunity to create a 'flower picture' in gemstones. Or you may prefer to make an abstract design, or to scatter tiny chippings of multi-coloured stones to form a mosaic.

Whatever the design you choose, and whether the box is metal or wood, stick the stones with epoxy resin adhesive following the manufacturer's instructions closely.

Boxes gain a new lease of life with stone and metallic braid decorations. To 'antique' a plastic box, spray it with gold paint. When dry, coat with black boot polish. While tacky, dust generously with a mixture of talc plus green and grey powder paint colours. Next day buff to polish.

Jars look pretty with tumbled stone decorations, and chunky knobs make jars easy to open.

Plastic pots (flower pots, margarine and yoghurt tubs) can be painted and bejewelled to make useful and very inexpensive containers.

Mirror mounted on velvet with tumbled stones is elegant and simple to make.

Wooden blocks from the toy-box or off-cuts from timber merchants make attractive bookends and paperweights.

1117
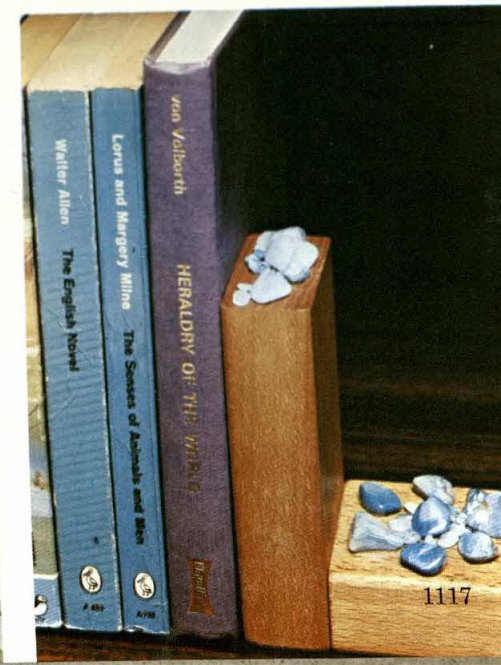
Making a mirror frame

(See photograph on previous page.)
Mirror and picture frames are other flat surfaces that lend themselves to decorating with polished tumbled stones. If you already have a plain flat wooden frame you can of course use this but it is not difficult to make your own very attractive and unique mirror. Buy a piece of mirror glass in the size you want from a glazier or a do-it-yourself shop, and a piece of chipboard (not hardboard as it may warp) which is a little larger than the glass and about 12mm ($\frac{1}{2}"$) thick.

Smooth the edges of the chipboard with medium grade glasspaper. Centre the mirror glass on the front of the board and trace a pencil line round it on the board to indicate where you will finally position it. The outer area, on which you will mount your tumbled stones, will act as a 'frame' for the glass.

Unless you plan to cover the chipboard frame very closely indeed with stones, you will probably want to finish it in some way first to make a more attractive background.

You could paint the chipboard with a coat of gloss or matt paint (having used first a suitable primer). Remember to carry your paint a little beyond your pencilled lines so there is no unsightly gap between mirror and 'frame'. When the paint is dry, stick the mirror glass into position with epoxy resin adhesive and decorate the painted area with stones.

Alternatively you can obtain a richly textured effect by covering the 'frame' with a remnant of velvet or hessian, pulled taut and tacked on to the back of the chipboard. Again there should be an overlap—the fabric must continue just under the mirror glass. The thickness of the fabric overlap will, however, prevent you from being able to stick the mirror glass directly on to the chipboard. So you will have to cut to size a piece of very thin plywood—about 2mm ($\frac{1}{16}"$) is about right if velvet is used—and stick this into the rectangle of chipboad. Then stick the mirror glass on to the plywood (fig.1).

A variety of sizes and shapes of stones can be used to decorate your mirror. They will look best and will stick more easily if they have one fairly flat side—and you do not need to use many stones to obtain delightful results.

Attach two screw eyes to the back of the board through which picture wire or cord can be threaded for hanging the glass. If ordinary picture cord is used, fix the hangers low enough to completely hide the cord behind the mirror. Or use a pretty cord, such as a macramé cord, in a colour that tones with the stones, and make it long enough to be seen.

Gemstone bonsai trees

Very small tumbled stones can be used to make a glamorous gemstone variation of Japanese bonsai—gnarled dwarf trees—with little leaves or flowers fashioned from polished stones.

Kits, complete with hand-thrown pots, are available by mail order or you can have great fun gathering together the materials yourself.

Use small flattish stones approximately 6mm ($\frac{1}{4}"$) long to represent leaves or petals, and smaller but not necessarily flat stones in a contrasting colour for buds or flower centres.
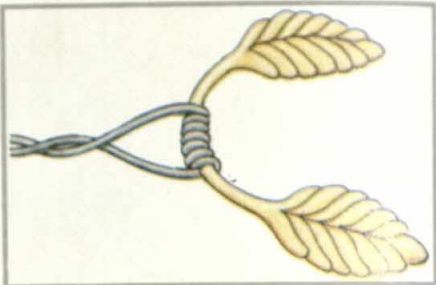
Bond the stones on to leaf bails or flower shaped findings with epoxy resin adhesive as in jewelry making, but first secure each finding to a length of soft wire and cover the wire with adhesive tape (preferably in a natural shade of green or brown with a matt finish) to look like a stalk or twig.

To do this, bend a 10cm (4") length of wire in two. Place the loop over a finding and wind the wire over and round until finding is firmly attached (fig.2). Then wrap adhesive tape round the wire stem.
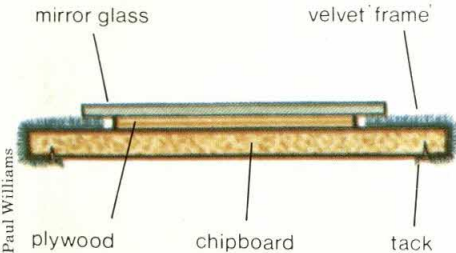
Glue the gem studded stems or twigs on to a piece of gnarled driftwood, cleverly placing them so they appear to sprout naturally from it.

Alternatively, twist and wrap more wire on to the end of your twigs to make branches and a tree trunk. Before covering the wires with tape, wrap a little soft lavatory paper round them to give thickness. Use scraps of crumpled kitchen foil here and there between the layers of paper to create the gnarled appearance so characteristic of bonsai trees (fig.3). Then cover with gutta-percha tape (floral).

Plant your tree in a pot filled with soil or plastic foam and cover it with green moss for a natural and attractive finish.

Right: Gemsai kits come complete but you could design your own bonsai tree using findings, small stones and driftwood—plus wire and Gutta percha (plastic adhesive tape) from florists and gardening shops.

2. *Reel wire 'twig' secures finding.*

mirror glass   velvet 'frame'

Paul Williams

plywood   chipboard   tack

1. *Thin plywood is stuck to centre of chipboard. Mirror glued to plywood is now raised clear of velvet 'frame'.*

Add tape and tiny stones to complete.

3. *Paper adds bulk to wire 'branches'.*

Detail showing flower shaped finding.

Picture framing

Once you have put something into a frame it is immediately isolated from its surroundings—which is the purpose of the exercise—and it acquires presence; it becomes important. There will be many occasions in your craft work when you need to frame something: the immediate example that comes to mind is a picture on a wall, but a motif on a cushion, or a stained glass hanging in front of an ordinary window are also 'framed' by the areas surrounding them. Whatever you frame will be highlighted.

In order to get the most out of your subject you will need to establish the right balance or relationship between the size, shape and position of the subject to be framed, the frame and its mount.

Once you have a picture or hanging to be framed there will be three things to take into consideration: the wall, the mount and the frame.

Mount. There are no hard and fast rules about the perfect proportions of the background space within a frame, but remember that the size of the space inside a frame is as important as the subject itself. A wide mount will help to separate the picture from a busy wallpaper, for example, while a narrow mount and frame will bring the two closer together (fig.1). Something which is closely framed also seems to increase in size (fig.2).

Again, a dark picture placed on a light mount will seem smaller than a light picture placed on a dark mount (fig.3). This is because light colours always seem larger than dark colours.

A mount can be used which tones in with the surrounding wall, for example a straw-coloured mount with a brown wall. In this case the mount and wall will be close together and need to be in harmonious colours.

Frame. Remember to take the size, shape and design of the frame into account. The type of frame you choose will set the style of the picture. An ornate, embellished frame will give a rather extravagant feel, whereas a simple, modest frame may not add anything to the picture, but it won't overpower it either.

Visual centre. When positioning your picture within a frame remember that the visual centre always lies above the geometric one. The upper half of a shape always seems stronger than the lower half, so shapes divided exactly in the middle produce a top-heavy effect (fig4.). Make allowances for this when positioning your subject within a frame; allow extra space for the mount below the picture.
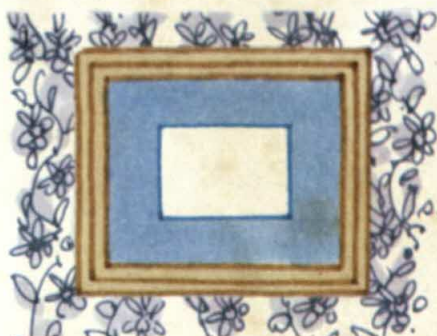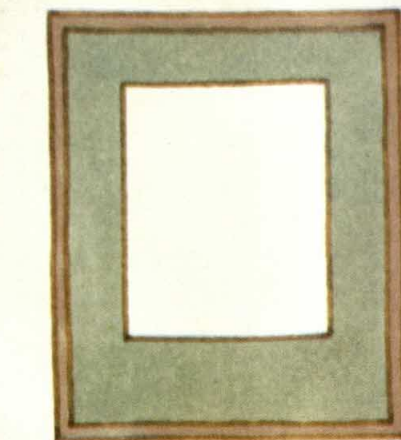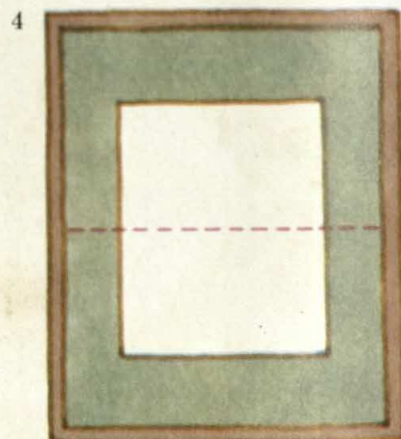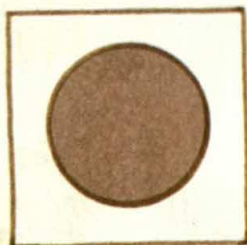
1. *Effects of differing mount width.*
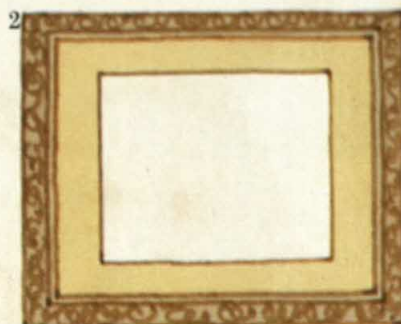
2. *Both pictures are the same size.*

3
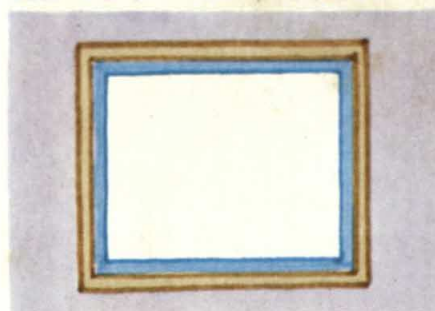
3. *A light picture seems prominent while a dark picture recedes.*

4. *A picture placed squarely in the middle of a frame will seem unbalanced.*

Victoria Drew